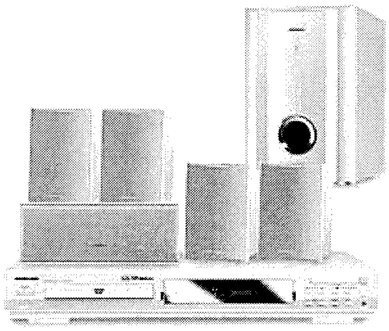
Profectis
Technischer Kundendienst
QUELLE.

# Serviceunterlage

**Produkt-Nr.:**
**088.358-7**
**Typ/Privileg-Nr.:**
**DVD-DR 3037**

## DVD RECEIVER

```
UTS-Nr.:          999        QUELLE
Best.Nr.:         0883587/01
Ger.Bez.:         DVD RECEIVER

GKz:                G  GERAET
WGT:              643  CD-VIDEO
Ditec Produktgruppe: 2  VIDEO
Klassierung:      DVD  DVD-PLAYER
Type/Privileg/Universum.Nr DVD DR 3037
Herstellertyp           DR1190
Beschreibung
VK-Preis: 498.00

Serviceart:             1
Garantie fuer Kunden  24 Monate
Sondervereinbarungen:  0  SIEHE SERVICEART

Garantiereparatur     0283264  PROFECTIS GMBH DVD-VIDEO-POOL-
Sondervereinbarungen:       0  SIEHE SERVICEART

--------------------------------------------------------------------------------
Katalog                                      Seite
  Erst  035 SONDERKATALOGE H/W 2003           0000
  Letzt 035 SONDERKATALOGE H/W 2003           0000

--------------------------------------------------------------------------------
Geraete Info:

--------------------------------------------------------------------------------
Technische Daten:

--------------------------------------------------------------------------------
Fehler:

--------------------------------------------------------------------------------
```



**universum**

Model Number:DR3037

# Service Manual

## DVD PLAYER/RECEIVER/PCMCIA CARD

Technical Specification ---------------------------------------------------------------- 1
Important Safeguards and Precautions ---------------------------------------------- 2
Troubleshooting ------------------------------------------------------------------------- 3
Function Overview ------------------------------------------------------------------ 4-7
Connection to Additional Components ------------------------------------------ 8-9
Basic Operation -------------------------------------------------------------------10-11
IC Lead Indentification and Internal Diagram ------------------------------- 12-13
System Block Diagram ------------------------------------------------------------- 14
Main Board View ------------------------------------------------------------------ 16-27
Control Board View --------------------------------------------------------------- 29-32
Power Board View ---------------------------------------------------------------- 34-37
Scart Board View ----------------------------------------------------------------- 39-40
PCMCIA Board View ------------------------------------------------------------- 42-43
Remote Control Board View --------------------------------------------------- 45-47
Mechanical Explode View and Part List --------------------------------------- 49-50

## PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special characteristics.These characteristics often pass unnoticed and protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements.Electrical components having such features are identified by excalmatory mark inside triangle in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully.The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, or other hazards.

© 2003 QUELLE CORPORATION All Rights Reserved.

# TECHNICAL SPECIFICATION

### DVD Section

| | |
|---|---|
| laser typeSemiconductor laser | wavelength 650mm |
| TV Signal system | PAL/NTSC |
| Video S/N | 480 lines (DVD) |
| CVBS video output | 1 Vp-p 75 ohms |
| S-Video output | Y-1 Vp-p 75 ohms |
| | C-0.286Vp-p, 75ohms |
| Scart output | 1 Vp-p 75 ohms |
| Digital output | SPDIF Optical |
| Audio frequency response(at 2 CH stereo mode) | DVD(PCM): 180Hz~20kHz (+/-1.0dB) |
| | CD: 180Hz~20kHz(+/-1.0dB) |

### Tuner Section

| | |
|---|---|
| System | PLL quartz-locked digital synthesizer system |
| Tuning system range | |
| FM | 87.5~108MHz / 50MHz |
| AM | 522~1620KHz / 9KHz |
| Frequency response | |
| FM | 150Hz-10kHz |
| AM | 150Hz-2.2kHz |

### Amplifier Section

| | |
|---|---|
| Output power | |
| Stereo mode | 2 x 50W |
| Surround mode | 50W |
| Frequency response | 180Hz -18kHz (+/-1dB) |
| Signal to noise ration | ≥ 65 dB (CCIR) |
| Input sensitivity | 400mV |

### Main Unit

| | |
|---|---|
| Power supply | 230V AC, 50Hz |
| power consumption | 160W maximum |
| Dimension | W435 x H59 x D359mm |
| Weight | 5kg |

### Speakers

| | |
|---|---|
| System | 1-way shielded |
| Output power | 5 x 50W maximum |
| Impedance | 8 ohm |
| Dimensions | |
| Front/Rear | W90 x H130 x D100mm |
| Center | W200 x H77 x D80mm |
| Weight | |
| Front | 0.511kg |
| Rear | 0.404kg |
| Center | 0.836kg |

### Subwoofer

| | |
|---|---|
| Output system power | 100W (4 ohms at 55Hz, THD10%) |
| Power supply | AC230V, 50Hz |
| Power consumption | 165W |
| Impedance | 4 ohms |
| Dimension | W200 x H305 x D316mm |
| Weight | 8.336kg |

**Design and specifications are subjected to change without notice. Weight and dimensions are approximate.**

# IMPORTANT SAFEGUARDS AND PRECAUTIONS

**Power Cord Protection**

To avoid any malfunctions of the unit, and to protect against electric shock, fire or personal injury, please observe the following:

- Hold the plug firmly when connecting or disconnecting the AC power cord.
- Keep the AC power cord away from the heating appliances.
- Never put any heavy object on the AC power cord.
- Do not attempt to repair or reconstruct the AC power cord in any way.

**Location and Handing**

- Air vents are provided in the cabinet to prevent excessive temperatures inside the unit. Do not place this unit in closed spaces, cover it, or otherwise block the vents.
- Do not place this unit in direct sunlight, or near heat sources.
- Keep this unit away from strong magnetic objects.
- Do not insert or drop anything into this unit through the air vents as this could cause serious damage, possibly resulting in fire.
- Do not place any object containing water or other liquids on this unit. In the event that liquid should enter the cabinet, unplug this unit immediately and contact the retailer or service centre immediately.
- Do not remove the cabinet. Touching parts inside the cabinet could result in electric shock and / or damage to the unit.
- Do not use the unit in a car. The operation can not guaranteed.

**Nonuse Periods**

- When the unit is not being used, turn the unit off.
- When left unused for a long period of time, the unit should be unplugged from the household AC outlet.

**No Fingers or Other Objects Inside**

Do not put any foreign object on the disc tray.

**Stacking**

Place the unit in a horizontal position, and do not place anything heavy on it.

**Condensation**

Moisture may form on the pickup lens in the following conditions:

- Immediately after a heater has been turned on.
- In a steamy or very humid room.
- When the unit is suddenly moved from a cold environment to a warm one.

If moisture forms inside this unit, it may not operate properly. In this case, turn on the power and wait about one hour for the moisture to evaporate.

**On adjusting volume**

Do not turn up the volume while listening to a portion with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level portion is played.

**If There is Noise Interference on the TV While a Broadcast is being Received**

Depending on the reception condition of the TV, interference may appear on the TV monitor while you watch a TV broadcast and the unit is left on. This is not a malfunction of the unit or the TV. To watch a TV broadcast, turn off the unit.

**Service**

- Do not attempt to service the unit yourself.
- Please refer any service to the nearest service centre.

**Copyright**

Audio-visual material may consist of copyrighted works which must not be recorded without the authority of the owner of the copyright. Please refer to relevant laws in your country.

**Copy protection**

This DVD player supports Macrovision copy protection.

On DVD discs that include a copy protection code, if the contents of the DVD disc are copied using a VCR, the copy protection code prevents the videotape copy from playing normally.

**Recommended Measures for Optimum Picture Excellence**

This unit is a precision device that is constructed using extremely accurate technology.

Soiling or friction affecting the pickup lens or disc drive can impair the image quality. At the worst, neither video nor audio will be played back. To obtain optimum picture quality, the player should be checked (cleaning and replacement of some parts) every 1,000 hours. Note that this period varies depending on the environment (temperature, humidity, dust, etc..) in which the player is used.

**Do not attempt to clean the pickup lens yourself.**

# TROUBLESHOOTING

If you experience any of the following difficulties while using the system, use this troubleshooting guide to help you remedy the problem. Should any problem persist, consult your nearest service center.

**No power**

- Is the power cord firmly plugged into the power outlet?
- One of the safety mechanisms may be operating. In this event, unplug the player from the power outlet briefly and then plug it in again.

**No picture**

- Check that the system is connected securely.
- The video connecting cord is damaged. Replace it with a new one.
- Make sure you connect the system to video input connector on the TV.
- Make sure you turn on the TV.
- Make sure you select the video input on the TV so that you can view the pictures from this system.

**The picture noise appears**

- Clear the disc.
- If video from this system has to go through your VCR to get to your TV, the copy-protection applied to some DVD programs could affect picture quality. If you still experience problems after checking your connections, please try connecting your DVD system directly to your TV S-Video input, if your TV is equipped with this input.

**The aspect ratio of the screen cannot be changed even though you set "TV DISPLAY" in the SETUP menu when you play a wide picture.**

- The aspect rate is fixed on your DVD disc.
- If you connect the system with the S-Video cable, connect directly to the TV. Otherwise, you may not change the aspect rate.
- Depending on the TV, you may not change the aspect rate.

**There is no sound or only a very low-level sound is heard.**

- Check that the speakers and components are connected securely.
- Make sure that you have selected the correct source on the system.
- The protective device on the system has been activated because of a short circuit. Turn off the system, eliminate the short-circuit problem and turn on the power again.
- The audio connecting cord is damaged. Replace it with a new one.
- The system is in pause mode or in slow-motion play mode, or fast forward or fast reverse is performed. Press **PLAY/ PAUSE ►/II** to return to normal play mode.
- Check the speaker settings

**The left and right sounds are unbalanced or reversed**

- Check that the speakers and components are connected correctly and securely.
- Adjust front balance parameter using **SELECT** and **VOLUME** up/down.

**Severe hum or noise is heard**

- Check that the speakers and components are connected securely.
- Check that the connecting cords are away from a transformer or motor, and at least 3 meters away from a TV set or fluorescent light.
- Move your TV away from the audio components.
- The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.
- Clear the disc.

**The sound loses stereo effect when you play a Video CD or a CD**

- Set the Audio mode to "STEREO"" in the SETUP menu.
- Make sure you connect the system appropriately.

**The surround effect is difficult to hear when you are playing a Dolby Digital sound track**

- Check the speaker connections.
- Depending on the DVD disc, the output signal may not be the entire 5.1 channel but monaural or stereo even if the sound track is recorded in Dolby Digital format.

**The sound comes from the center speaker only**

- Depending on the disc, the sound may come from the center speaker only.

**No sound is heard from the center speaker**

- Make sure the Center is set to " ON" in SETUP menu.
- You may set the listening mode to Dolby Pro Logic Phantom .
- Adjust the speaker volume.

**No sound or only a very low-level sound is heard from the rear speakers**

- Make sure the Rear is set to "ON" in SETUP menu.
- Adjust the speaker volume.

**The language for the subtitles cannot be changed when you play a DVD**

- Multilingual subtitles are not recorded on the DVD.
- Changing the language for the subtitles is prohibited on the DVD.

**The subtitles cannot be turned off when you play a DVD**

- Depending on the DVD, you may not be able to turn the subtitles off.

**The angles cannot be changed when you play a DVD**

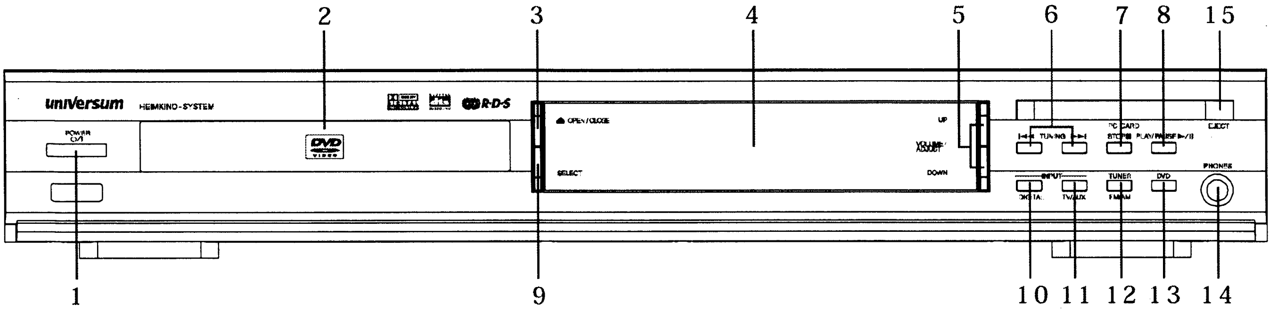
- Multi-angles are not recorded on the DVD.
- Change the angles when the angle mark appears on the TV screen.
- Changing the angles is prohibited on the DVD.

**The system does not operate properly**

- Static electricity, etc., may affect the system's operation. Press the **POWER** button to turn off, then press again to turn on.

# FUNCTION OVERVIEW

## Front Panel


2
3
4
5
6
7
8
15
universum
HEIMKINO-SYSTEM
POWER
R·D·S
OPEN / CLOSE
SELECT
UP
VOLUME/ADJUST
DOWN
TUNING
PC CARD
STOP
PLAY/PAUSE
EJECT
INPUT
DIGITAL
TV/AUX
TUNER
FM/AM
DVD
PHONES
1
9
10
11
12
13
14

**1. POWER ⏻/I**
Turns on and off the main power of the system.

**2. DISC Tray**
Place a disc on the tray.

**3. OPEN / CLOSE ▲**
Open or close the disc tray.

**4. FRONT PANEL DISPLAY**
Indicate the display details of playing disc.

**5. VOLUME / ADJUST ∨ ∧**
Increase or decrease the master volume level or the selected channel level.

**6. TUNING |◄◄ ►►|**
In tuner mode, press to tune to a higher or lower frequency. For automatic tuning, press and hold it for more than 1 second.

**7. STOP ■**
Stop playback a disc and clear the stored program.

**8. PLAY / PAUSE ►/II**
Start or pause temporarily playback.

**9. SELECT**
Select the audio channel to view or adjust its level.

**10. INPUT - DIGITAL**
Display digital signal.

**11. INPUT - TV / AUX**
Select the TV or AUX function.

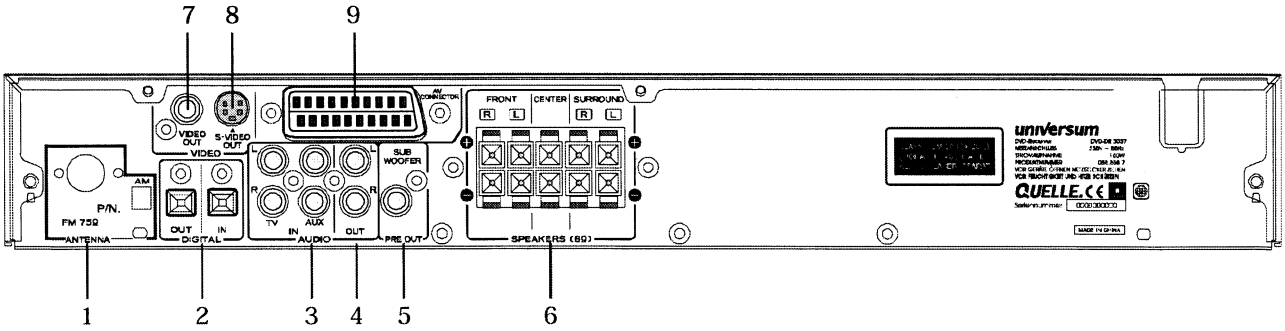
**12. TUNER - FM / AM**
Select to enter TUNER mode.

**13. DVD**
Select to enter DVD mode.

**14. PHONE**
Connect to headphone or earphone.

**15. EJECT / PC CARD SLOT**
Insert a PC card to the slot. Press EJECT to take out the PC card. (Multimedia card, Compact Flash card, SD card, Memory stick, and Smart Media card.)

## Back Panel


7
8
9
VIDEO OUT
S-VIDEO OUT
VIDEO
AV CONNECTOR
FRONT
CENTER
SURROUND
R
L
SUB WOOFER
AM
P/N.
FM 75Ω
ANTENNA
OUT
IN
DIGITAL
TV
AUX
IN
AUDIO
OUT
PRE OUT
SPEAKERS (8Ω)
universum
QUELLE
MADE IN CHINA
1
2
3
4
5
6

**1. AM/FM ANTENNA TERMINALS**
Connect to the supplied AM / FM antennas.

**2. DIGITAL IN/OUT**
Connect to the an external device with digital signal.

**3. AUDIO IN** (TV / AUX)
Connect to AUDIO output of TV or VCR.

**4. AUDIO OUT**
Connect to the AUDIO input of an external recording device or amplifier.

**5. SUBWOOFER PRE OUT**
Connect to the component with an RCA pin cable (monoral).

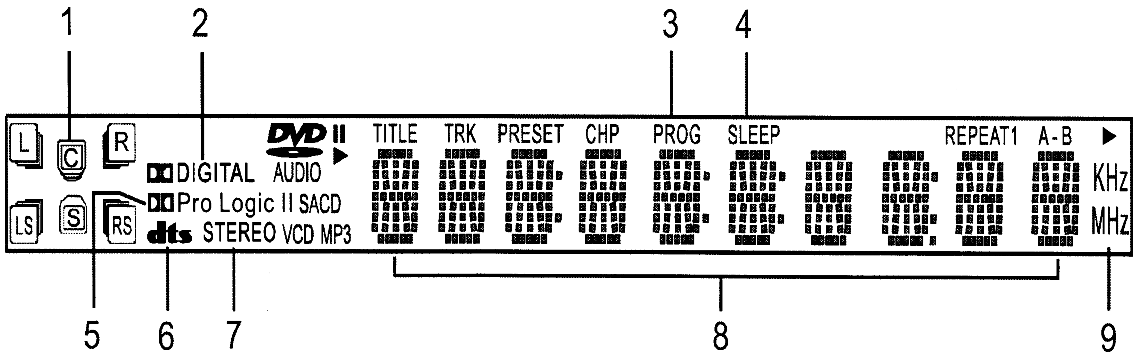
**6. SPEAKER OUTPUT TERMINALS**
Connect to the supplied speakers.

**7. VIDEO OUT**
Connect to VIDEO output of TV.

**8. S-VIDEO OUT**
Connect to S-VIDEO input of TV.

**9. SCART OUT**
Connect to SCART input of TV.

## Front Panel Display


1
2
3
4
L
C
R
LS
S
RS
DIGITAL
Pro Logic II
dts
STEREO
DVD II
AUDIO
SACD
VCD
MP3
TITLE
TRK
PRESET
CHP
PROG
SLEEP
REPEAT1
A-B
KHz
MHz
5
6
7
8
9

**1. Speaker Icons**
Illuminate the activating speakers.

**2. Dolby Digital Indicator**
Illuminate during playback of Dolby Digital 5.1 CH source.

**3. Program Indicator**
Illuminate during programmed palyback.

**4. Sleep Indicator**
Illuminate when SLEEP TIMER is set.

**5. Dobly Prologic II**
Illuminate when Dobly Digital II is activated.

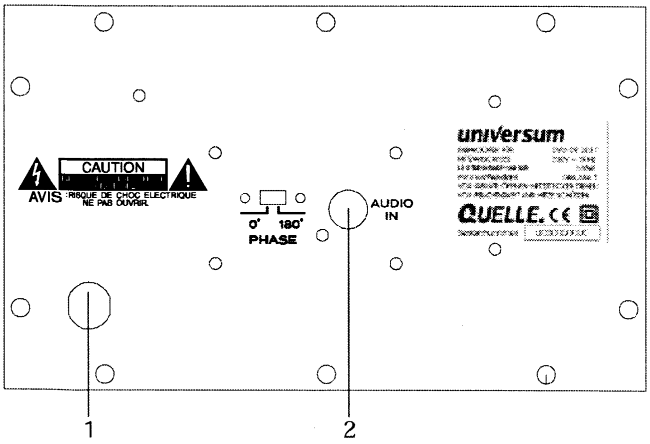
**6. DTS Indicator**
Illuminate during playback of DTS source.

**7. Stereo Indicator**
Illuminate when an FM stereo broadcast is tuned.

**8. Status bar**
splay current status or time (Title, Track, Preset, Chapter).

**9. Frequency Unit Indicator**
In AM mode, kHz lights up; IN FM mode, MHz lights up.

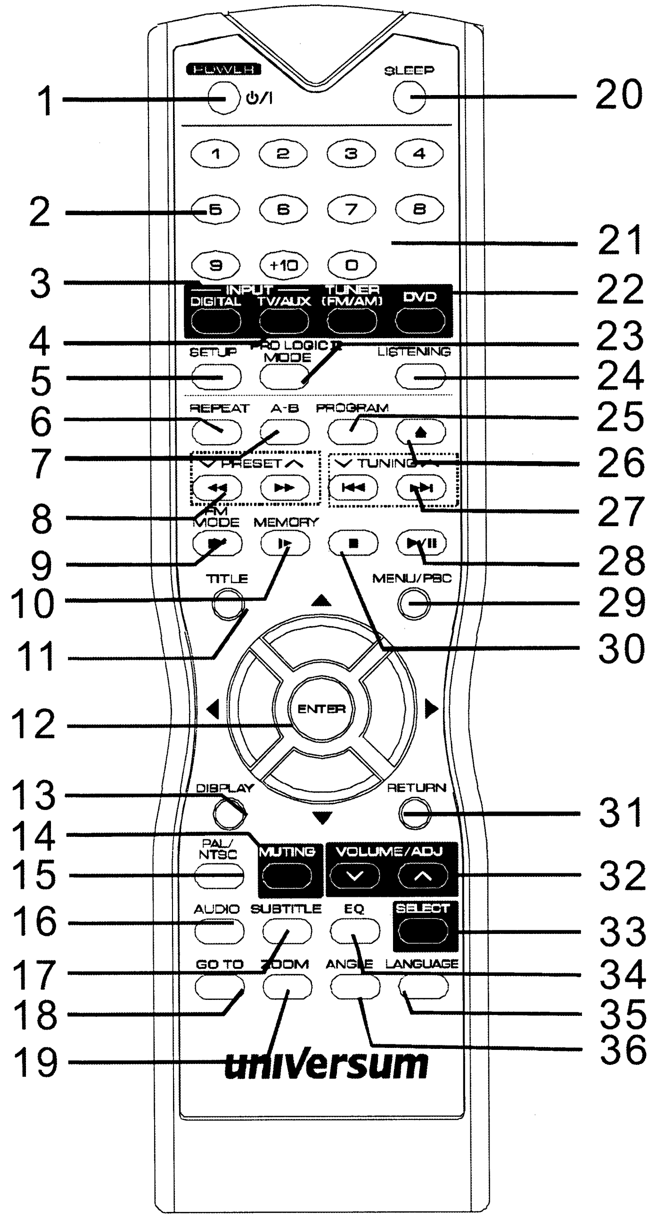
## Subwoofer Panel


CAUTION
AVIS RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR
0° 180°
PHASE
AUDIO IN
universum
QUELLE
CE
1
2

**1. AC CORD**
Connect to a 230V AC power outlet.

**2. AUDIO INPUT**
Connect to the AUDIO output of the main unit.

## Remote Control


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
POWER
SLEEP
⏻/I
1
2
3
4
5
6
7
8
9
+10
0
INPUT
DIGITAL
TV/AUX
TUNER (FM/AM)
DVD
SETUP
PRO LOGIC II MODE
LISTENING
REPEAT
A-B
PROGRAM
PRESET
TUNING
FM MODE
MEMORY
TITLE
MENU/PBC
ENTER
DISPLAY
RETURN
PAL/ NTSC
MUTING
VOLUME/ADJ
AUDIO
SUBTITLE
EQ
SELECT
GO TO
ZOOM
ANGLE
LANGUAGE
universum

**1. POWER ⏻/I**

Turn the system power On or Off.

**2. NUMBER**

Key in track numbers, password, preset channels.

**3. INPUT - DIGITAL INPUT**

Select DIGITAL INPUT mode directly.

**4. INPUT - TV/AUX**

Select the TV or AUX mode.

**5. SETUP**

Display or exit the SETUP menu.

**6. REPEAT**

Select titles/chapters/tracks in a repeat order.

**7. A-B**

Specify a section and play it repeatly.

**8. PRESET**

In DVD mode, press to search fast forward/forward. In TUNER mode, press to select the preset station.

**9. FM MODE**

Do the single stepping play while playing DVD or VCD. Switch monaural or stereo during FM stereo reception.

**10. MEMORY**

In DVD mode, Activate the slow-motion play.
In TUNER mode, press to preset the radio station.

**11. TITLE**

Display the title menu when playing a DVD.

**12. ENTER / ◄ ► ▲ ▼**

Move the cursor to select and excute the items or settings.
In PC card mode, press to rotate the photos.

**13. DISPLAY**

Switch the item displayed on the TV screen or and on the front panel display.

**14. MUTING**

Mute / unmute all audio outputs.

**15. PAL/NTSC**

Change the color system temporarily to match your TV standard.

**16. AUDIO**

Select the audio channels for sound or desired language for the audio when playing a DVD.Switch between monaural and stereo during FM stereo reception.

**17. SUBTITLE**

Select a desired language for the subtitles while playing a DVD.

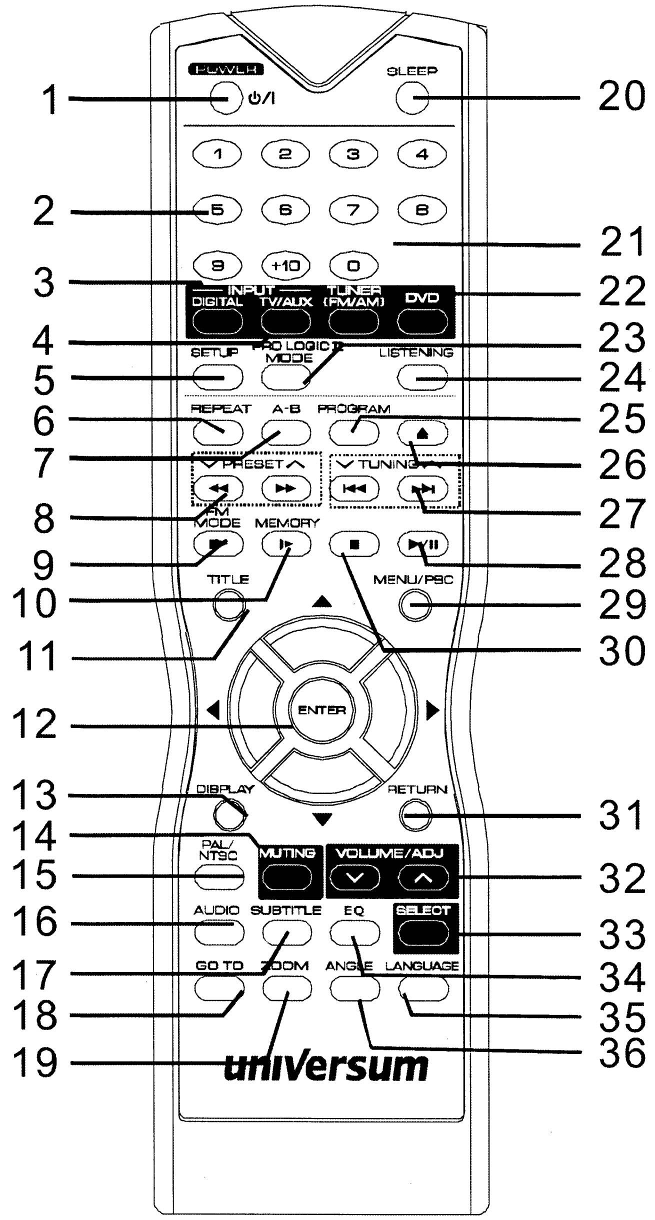
**18. GO TO**

select a start point to play.

**19. ZOOM**

Zoom in the on-screen images.

## Remote Control


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
POWER
SLEEP
⏻/I
1
2
3
4
5
6
7
8
9
+10
0
INPUT
DIGITAL
TV/AUX
TUNER (FM/AM)
DVD
SETUP
PRO LOGIC II MODE
LISTENING
REPEAT
A-B
PROGRAM
PRESET
TUNING
FM MODE
MEMORY
TITLE
MENU/PBC
ENTER
DISPLAY
RETURN
PAL/NTSC
MUTING
VOLUME/ADJ
AUDIO
SUBTITLE
EQ
SELECT
GO TO
ZOOM
ANGLE
LANGUAGE
universum

**20. SLEEP**
Activate the sleep timer .

**21. TUNER [FM/AM]**
Select to enter TUNER (FM or AM )mode.

**22. DVD**
Select to enter DVD mode.

**23. PRO LOGIC II MODE**
Select the Dolby Pro Logic Surround mode.

**24. LISTENING**
Select a preferred listening mode.

**25. PROGRAM**
Store stracks for program play.

**26. OPEN / CLOSE ▲**
Open or close the disc tray.

**27. TUNING**
In TUNER mode, press to tune to a higher or lower frequency. For automatic tuning, press and hold it for more than 1 second.
In DVD and PCMCIA mode, press to skip to next or previous track.

**28. PLAY / PAUSE**
Start or pause temporarily playback.

**29. MENU / PBC**
Display the menu and switch the PBC function on or off when playing a VCD (ver.2.0)

**30. STOP**
Stop playback a disc and clear the stored program.

**31. RETURN**
Display the root menu when playing a DVD.
Go back to PBC menu when playing a VCD

**32. VOLUME/ADJ ∨ ∧**
Increase or decrease the master volume level or the selected channel level.

**33. SELECT**
Select the audio channel to view or adjust its level.

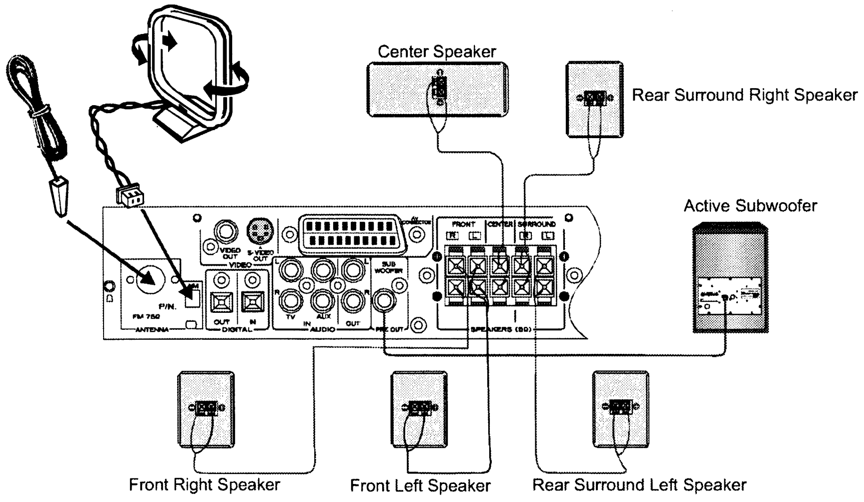
**34. EQ**
Offer pop, rock, jazz, and classic modes. (EQ stands for Electronic Equalizer Preset System.)

**35. LANGUAGE**
Select a desired language for the audio when playing a DVD.

**36. ANGLE**
Change the angles when playing a DVD.

# CONNECTION TO ADDITIONAL COMPONENTS

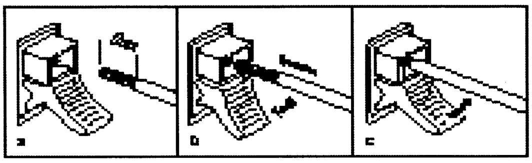
## Speaker System and Antenna Hookups



### Speakers

Connect the supplied speaker system using the supplied speaker cables by matching the colors of the terminals and those of the cables.

- Press up (or down) the speaker's jack and fully insert the stripped portion of the speaker cable into the jack, then release.



- At the rear of each supplied speakers you will find two click fixation connectors, a black one is for (-) and red/ white/ gree/ gray/ blue one is for(+).

| Speakers | ⊖ | ⊕ |
|---|---|---|
| FRONT (R) | BLACK | RED |
| FRONT (L) | BLACK | WHITE |
| CENTER | BLACK | GREEN |
| SURROUND (R) | BLACK | GREY |
| SURROUND (L) | BLACK | BLUE |

### Notes

- Ensure that the speaker cables are correctly connected. Improper connections may damage the system due to shortcircuit.
- For optimal sound performance, use the supplied speakers.
- Do not connect more than one speaker to any one pair of +/- speaker jacks.
- Do not connect speakers with an impedance lower than the speakers supplied. Please refer to the SPECIFICATIONS section of this manual.

### Antenna

- **AM Indoor Loop Antenna**

  Connect the supplied AM loop antenna to the AM jack. Position the loop antenna to receive the clearest sound.

- **FM Indoor Antenna**

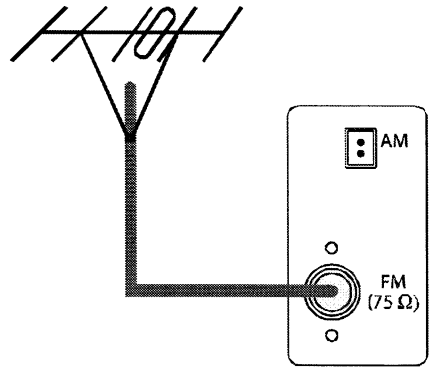
  Connect the supplied FM antenna to the FM jack. Move the antenna in various directions until the clearest signal is received.

### Note

Keep the antenna as far as possible from the TV, VCR or any radiation source to prevent unwanted noise.

- **FM Outdoor Antenna**

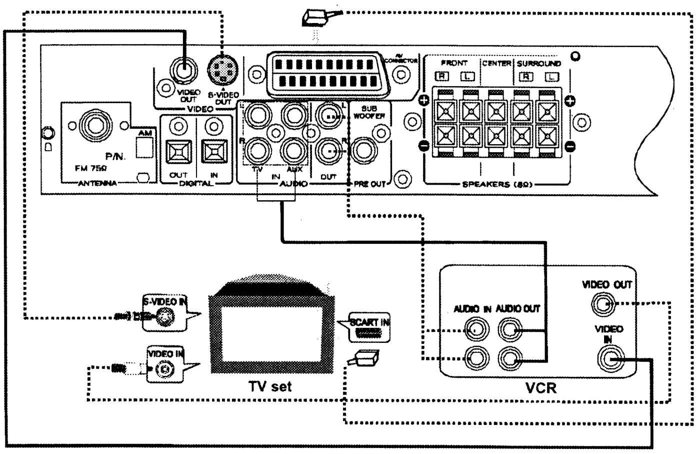
  For better FM reception, use a 75 ohm coaxial (not supplied) to connect the system to an outdoor FM antenna as shown.



### Notes

- If you connect the system to an outdoor antenna, ground it against lightning.
- To prevent a gas explosion, do not connect the ground wire to a gas pipe.

# TV and Optional Componet Hookups



You must connect a TV to the DVD system in order to use the DVD player.

You can connect other external components to the DVD system in order to use the home theater audio system surround sound capabilities.

For example, connects to a TV through AV connector and function switch to "TV" as the input source or connect to a VCR and select AUX as the input source.

**IMPORTANT**

- There are various ways to connect the system to a TV (as shown in the illustration). You only need to make one of the best connec tions, depending on the capabilities of your TV system.
- Always refer to the instruction manual of the connected equipment to make an optimal connection.
- Some DVD discs have anti-copying devices, so you will not able to record the disc through a TV /VCR.

**Use Audio In Jack**

Use the supplied audio cables to connect AUDIO IN jacks to the corresponding AUDIO OUT jacks on the TV /VCR or other audio/ visual components.

**Use AV Connector Jack**

Use the AV connector cable to connect AV connector jacks to the corresponding video input jacks on a TV (scart in).

If you TV is not equipped with scart input jacks, you can select one of the following alternative connections:

**Option 1**

Connect the S-VIDEO OUT jack to the s-video input jack on the TV using a S-VIDEO cable.

**Option 2**

Connect the VIDEO OUT jack to the video input jack on the TV using a video cable.

**Note**

Do not connect other video or audio jacks when AV connector jack are connected.

**Use Audio Out Jack**

- For connecting to an amplifier, connect the audio system or TV with analog audio inputs.
- For connecting to a CD or tape recorder, make sure switch with an analog recording.

**Use Digital Jack**

Use the Digital cables to connect optical jack to correspond to receive digital signal.

**Note**

- MP3 audio is not available on the digital output.
- Digital recording is only possible on a CD or VCD.

# Connecting the AC Power Cord

Before connecting the AC power cord (main lead) of this system to a wall outlet, connect the speakers to the system.

- Connect the AC power cord of the active subwoofer.
- Connect the AC power cords (main leads) of your TV, optional components to a wall outlet.

**Note**

- Power Requirements: AC230V~ 50Hz.
- The power that differs from above value will damage the system or cause the system to work abnormally.
- You can connect other external components to the DVD system in order to use the home theater audio system surround capabilities.

# BASIC OPERATION

1. When you complete all the connections, plug the AC power cord of the player and subwoofer.
2. Press POWER (⏻/I) to switch on the main power.
3. Press DVD, TUNER or Digital/TV/AUX in remote controller to select the input source.
4. DVD/VCD/CD discs is detected prior to PC card when both PC card and disc are put in.
5. Press OPEN/CLOSE ( ▲ ) to open the disc tray, press again to close the disc tray.

## DVD

If a title menu appears on the screen, select an item by pressing the ◄ / ► / ▲ / ▼ buttons and then press the ENTER button.

- Depending on the disc, you can use the numeric buttons to select an item.
- “Title menu” may simply be called “menu” or “title” in the instructions supplied with the disc.
- If you press the MENU/PBC button or the TITLE button during playback, title menu will appear on the screen. (In some cases, the playback might restart from the beginning of the disc.)

### Switching to PC card mode

1. While stopped, press GOTO button.
2. Use ▲ / ▼ button to select PC CARD and press ENTER.

## Video CDs with PBC

When a Video CD (Version 2.0) with Playback Control function (PBC) is loaded, a menu will appear on the screen.
Select an item by pressing the numeric buttons to start playback.

- Press the ►►I button to advance to the next page. Press the I◄◄ button to return to the previous page.
- If you press the RETURN button during playback, the menu will appear on the screen.
- Following buttons does not work during PBC playback. REPEAT, A-B, PROGRAM
- Press the MENU/PBC button to turn the PBC function on or off.

If you press the MENU/PBC button during playback, playback will stop.

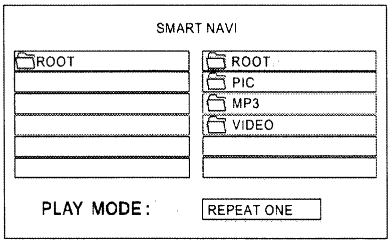
When the PBC function is off:
If you press the PLAY/PAUSE button (►/II) in the stop mode, playback will start from the first track.

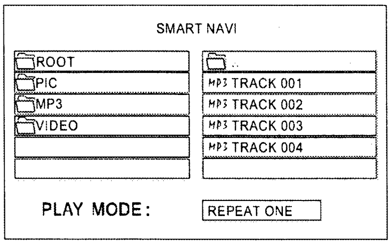
When the PBC function is on:
If you press the PLAY/PAUSE button (►/II) in the stop mode, a menu will appear on the screen.
Select an item by pressing the numeric buttons to start playback.

## MP3

- Press the MENU/PBC to turn the MP3 menu “SMART NAVI” on or off. If you press the MENU/PBC button during playback, playback starts from the first track.

When the MP3 menu is on:
Select a directory by pressing the ▲/▼ buttons and press the ENTER button.
A list of track numbers and titles (file names) will be shown on the right side of the screen. Select a track and press the ENTER button or the PLAY/PAUSE button. Playback will start from the selected track.





- ◄ / ► / ▲ / ▼ buttons don’t work during playback.
- If you want to select another directory, select ROOT by pressing the ▲ / ◄ button and press the ENTER button to go back to the ROOT directory.
- Depending on the disc, invisible directories such as “TRASH” might be shown on the screen.

Please disregard directories which does not contain MP3 files.

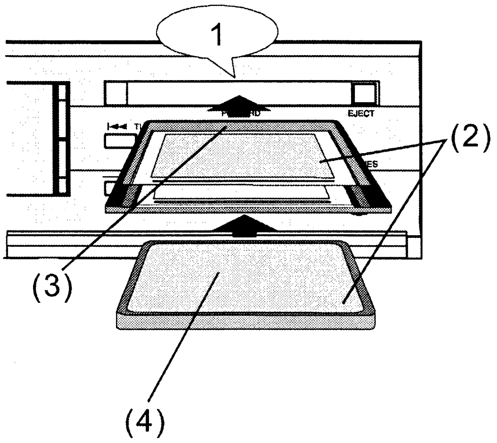
## PC Card

Carry out insertion/removal of the PC card after turning the unit off.

- When the card is being read, do not turn off the power or remove the card. Such action may result in malfunction or loss of the card’s contents.

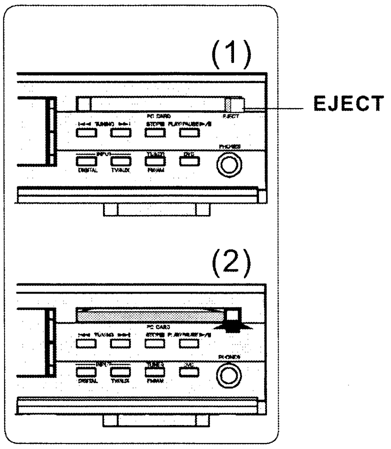
### Inserting the card

1. Hold the edge of the card and insert unit firmly home. Do not press directly on the memory card.
2. ◄ Align to match the mark.
3. Terminal connections facing into the unit.
4. The labelled side facing upwards.



### Remving the card

Press the EJECT button and card come out.



- If using the adaptor, remove the adaptor and card together.
- It is not possible to open the disc tray while the JPEG pictures screen is displayed.

### Selecting the folder

1. While stopped, the root menu appears.
2. Use ◄ / ► / ▲ / ▼ to select preterred folder and press ENTER.
3. Use ▲ / ▼ to select folders (JPEG/VCD/MP3) and press ENTER. A list of folders appear.

### Displaying JPEG pictures (Album Display)

You can display a list of the JPEG pictures or diaplay pictures one by one from any folder existing on the PC card, HDD or DVD-RAM.

1. While stopped
2. Use ◄ / ► / ▲ / ▼ to select JPEG and press ENTER.
3. Select the folder for displaying.(Refer to selecting the folder.)
4. Use ▲ / ▼ to select JPEG pictures and press ENTER.

- A list of the JPEG pictures in the folder appears.

### To display JPEG pictures one by one slide show

Use ◄ / ► / ▲ / ▼ to select a JPEG picture and press ENTER.

- If there are more than 10 JPEG pictures, use ◄ / ► / ▲ / ▼ to select ►►I (NEXT) and press ENTER. Select I◄◄ (PREVIOUS) to move back.
- While in the Slide Show. it is possible to perform this function.

### To stop JPEG picture display

Press STOP ■ (The picture display will stop and return to root menu)

### To select the next or previous JPEG picture

- While in JPEG picture display, use I◄◄ ►►I .
  ►►I : next JPEG picture
  I◄◄ : previous JPEG picture
- Press twice I◄◄ or ►►I to go back to the previous JPEG picture.
- To pause JPEG picture display, press pause. To start playing, press play.

### To rotate the picture

While in JPEG picture display.

Use ◄ / ► / ▲ / ▼ to rotate the JPEG pictures.

- The JPEG picture as a whole is rotated and diaplayed.
- Rotation information will not be stored.

### Notes

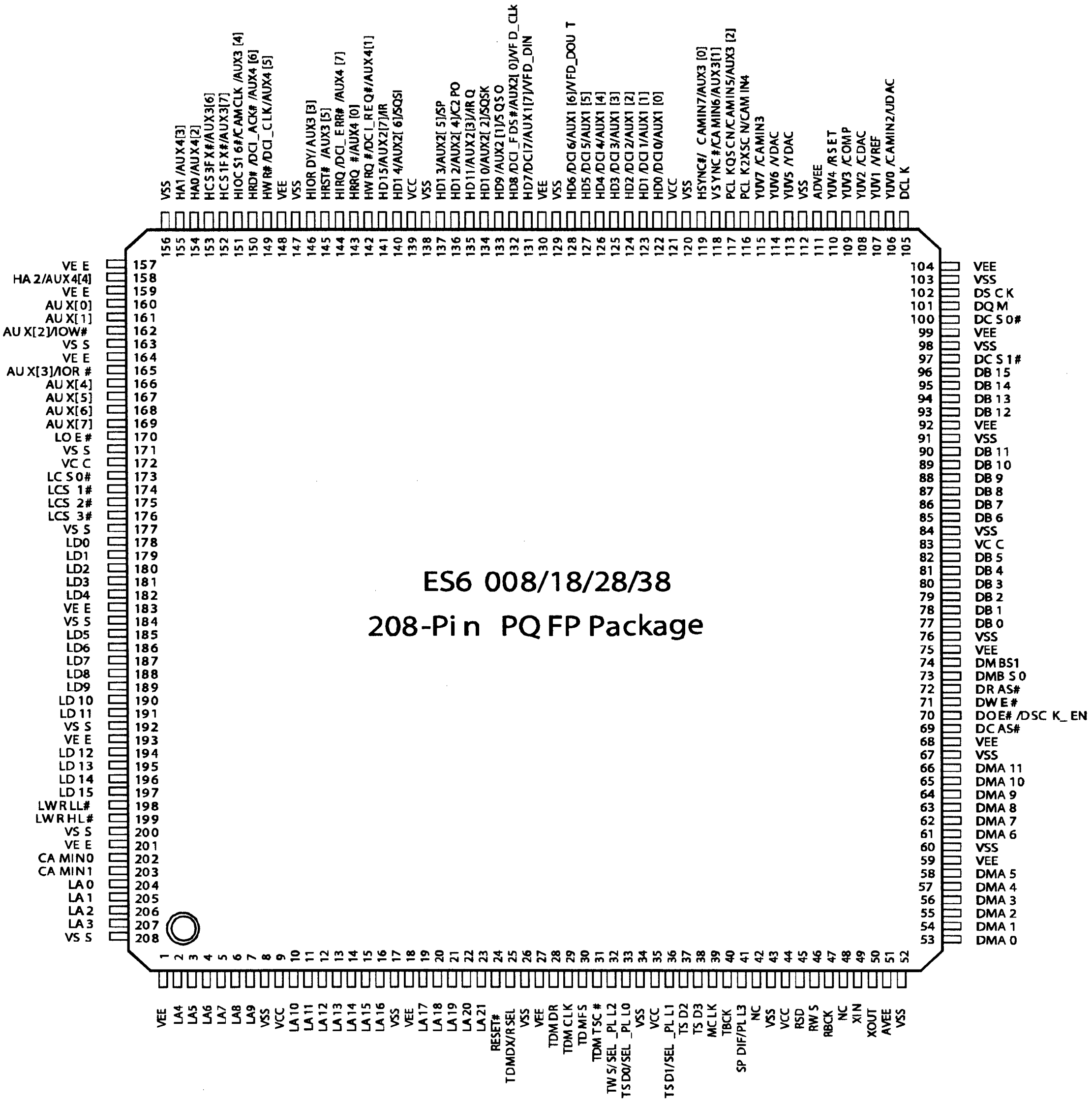
- While in the Slide Show, it is possible to perform this function.
- You can also use ▲ / ▼ to select PLAY MODE (SINGLE/REPEAT ONE/FOLDER/FOLDER REP/DISC/DISC REP) and press ENTER.

### Switching to DVD mode

1. While stopped, press GOTO button.
2. Use ▲ / ▼ button to select DVD DRIVE and press ENTER.

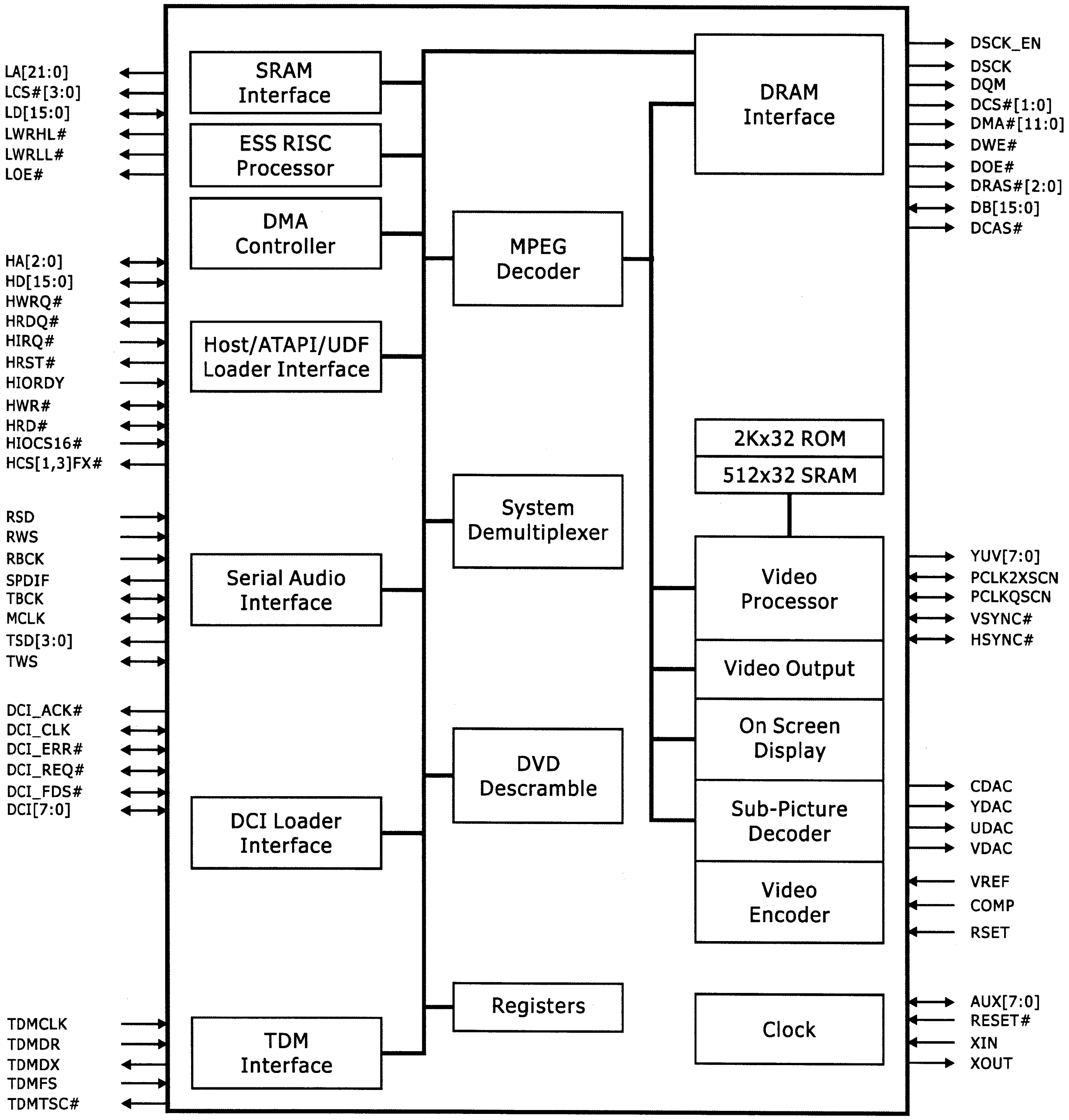
# IC LEAD IDENTIFICATION AND INTERNAL DIAGRAM

## ES6028 PIN ASSIGMENT

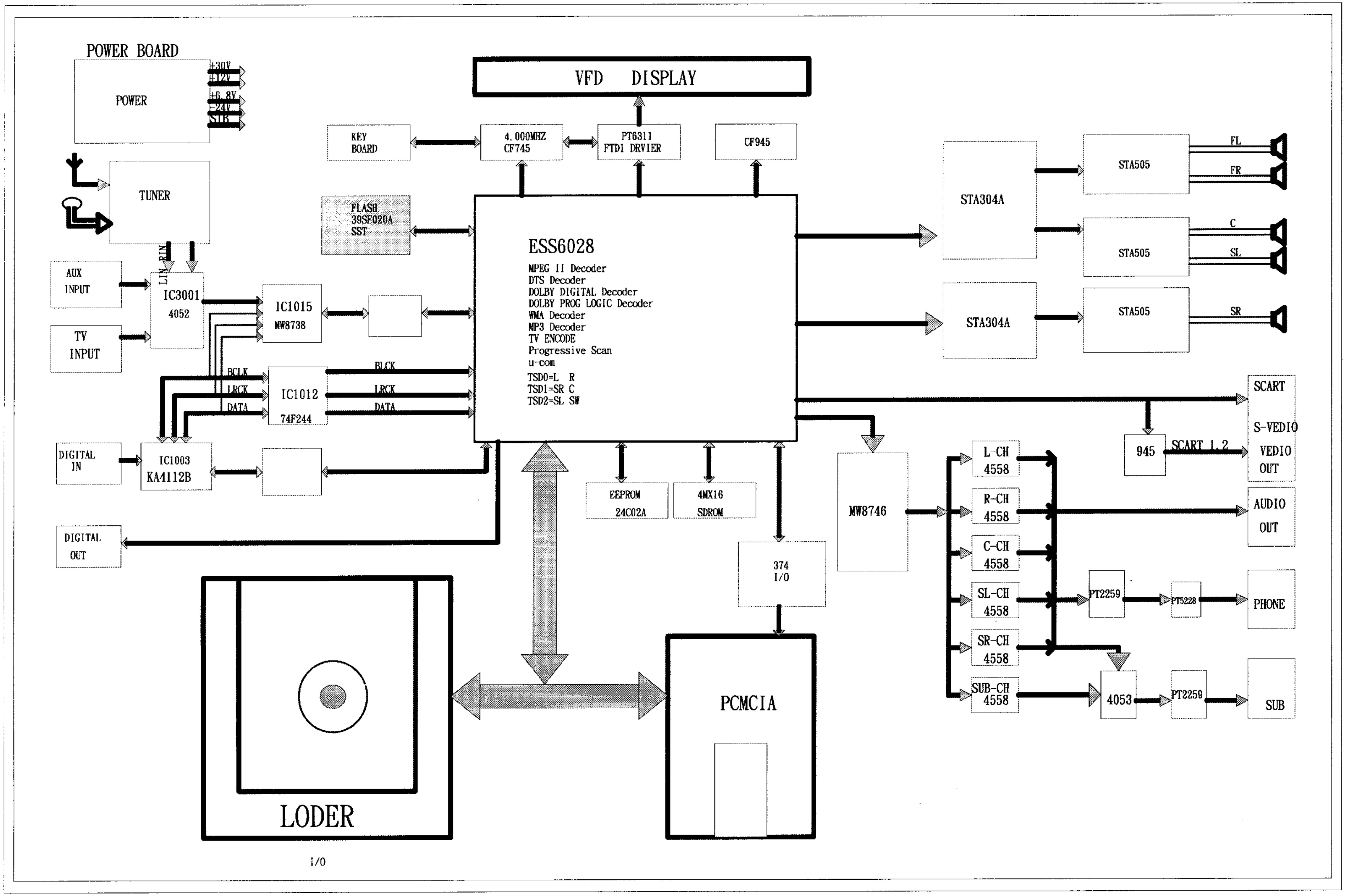

ES6 008/18/28/38
208-Pin PQFP Package
1 VEE
2 LA4
3 LA5
4 LA6
5 LA7
6 LA8
7 LA9
8 VSS
9 VCC
10 LA10
11 LA11
12 LA12
13 LA13
14 LA14
15 LA15
16 LA16
17 VSS
18 VEE
19 LA17
20 LA18
21 LA19
22 LA20
23 LA21
24 RESET#
25 TDMDX/RSEL
26 VSS
27 VEE
28 TDMDR
29 TDMCLK
30 TDMFS
31 TDMTSC#
32 TWS/SEL_PLL2
33 TSD0/SEL_PLL0
34 VSS
35 VCC
36 TSD1/SEL_PLL1
37 TSD2
38 TSD3
39 MCLK
40 TBCK
41 SPDIF/PLL3
42 NC
43 VSS
44 VCC
45 RSD
46 RWS
47 RBCK
48 NC
49 XIN
50 XOUT
51 AVEE
52 VSS
53 DMA0
54 DMA1
55 DMA2
56 DMA3
57 DMA4
58 DMA5
59 VEE
60 VSS
61 DMA6
62 DMA7
63 DMA8
64 DMA9
65 DMA10
66 DMA11
67 VSS
68 VEE
69 DCAS#
70 DOE#/DSCK_EN
71 DWE#
72 DRAS#
73 DMBS0
74 DMBS1
75 VEE
76 VSS
77 DB0
78 DB1
79 DB2
80 DB3
81 DB4
82 DB5
83 VCC
84 VSS
85 DB6
86 DB7
87 DB8
88 DB9
89 DB10
90 DB11
91 VSS
92 VEE
93 DB12
94 DB13
95 DB14
96 DB15
97 DCS1#
98 VSS
99 VEE
100 DCS0#
101 DQM
102 DSCK
103 VSS
104 VEE
105 DCLK
106 YUV0/CAMIN2/UDAC
107 YUV1/VREF
108 YUV2/CDAC
109 YUV3/COMP
110 YUV4/RSET
111 ADVEE
112 VSS
113 YUV5/YDAC
114 YUV6/VDAC
115 YUV7/CAMIN3
116 PCLK2XSCN/CAMIN4
117 PCLKQSCN/CAMIN5/AUX3[2]
118 VSYNC#/CAMIN6/AUX3[1]
119 HSYNC#/CAMIN7/AUX3[0]
120 VSS
121 VCC
122 HD0/DCI0/AUX1[0]
123 HD1/DCI1/AUX1[1]
124 HD2/DCI2/AUX1[2]
125 HD3/DCI3/AUX1[3]
126 HD4/DCI4/AUX1[4]
127 HD5/DCI5/AUX1[5]
128 HD6/DCI6/AUX1[6]/VFD_DOUT
129 VSS
130 VEE
131 HD7/DCI7/AUX1[7]/VFD_DIN
132 HD8/DCI_FDS#/AUX2[0]/VFD_CLk
133 HD9/AUX2[1]/SQSO
134 HD10/AUX2[2]/SQSK
135 HD11/AUX2[3]/IRQ
136 HD12/AUX2[4]/C2PO
137 HD13/AUX2[5]/SP
138 VSS
139 VCC
140 HD14/AUX2[6]/SQSI
141 HD15/AUX2[7]/IR
142 HWRQ#/DCI_REQ#/AUX4[1]
143 HRRQ#/AUX4[0]
144 HIRQ/DCI_ERR#/AUX4[7]
145 HRST#/AUX3[5]
146 HIORDY/AUX3[3]
147 VSS
148 VEE
149 HWR#/DCI_CLK/AUX4[5]
150 HRD#/DCI_ACK#/AUX4[6]
151 HIOCS16#/CAMCLK/AUX3[4]
152 HCS1FX#/AUX3[7]
153 HCS3FX#/AUX3[6]
154 HA0/AUX4[2]
155 HA1/AUX4[3]
156 VSS
157 VEE
158 HA2/AUX4[4]
159 VEE
160 AUX[0]
161 AUX[1]
162 AUX[2]/IOW#
163 VSS
164 VEE
165 AUX[3]/IOR#
166 AUX[4]
167 AUX[5]
168 AUX[6]
169 AUX[7]
170 LOE#
171 VSS
172 VCC
173 LCS0#
174 LCS1#
175 LCS2#
176 LCS3#
177 VSS
178 LD0
179 LD1
180 LD2
181 LD3
182 LD4
183 VEE
184 VSS
185 LD5
186 LD6
187 LD7
188 LD8
189 LD9
190 LD10
191 LD11
192 VSS
193 VEE
194 LD12
195 LD13
196 LD14
197 LD15
198 LWRLL#
199 LWRHL#
200 VSS
201 VEE
202 CAMIN0
203 CAMIN1
204 LA0
205 LA1
206 LA2
207 LA3
208 VSS

# IC LEAD IDENTIFICATION AND INTERNAL DIAGRAM

## ES6028 INTERNAL IC DIAGRAM


LA[21:0]
LCS#[3:0]
LD[15:0]
LWRHL#
LWRLL#
LOE#
HA[2:0]
HD[15:0]
HWRQ#
HRDQ#
HIRQ#
HRST#
HIORDY
HWR#
HRD#
HIOCS16#
HCS[1,3]FX#
RSD
RWS
RBCK
SPDIF
TBCK
MCLK
TSD[3:0]
TWS
DCI_ACK#
DCI_CLK
DCI_ERR#
DCI_REQ#
DCI_FDS#
DCI[7:0]
TDMCLK
TDMDR
TDMDX
TDMFS
TDMTSC#
SRAM Interface
ESS RISC Processor
DMA Controller
Host/ATAPI/UDF Loader Interface
Serial Audio Interface
DCI Loader Interface
TDM Interface
MPEG Decoder
System Demultiplexer
DVD Descramble
Registers
DRAM Interface
2Kx32 ROM
512x32 SRAM
Video Processor
Video Output
On Screen Display
Sub-Picture Decoder
Video Encoder
Clock
DSCK_EN
DSCK
DQM
DCS#[1:0]
DMA#[11:0]
DWE#
DOE#
DRAS#[2:0]
DB[15:0]
DCAS#
YUV[7:0]
PCLK2XSCN
PCLKQSCN
VSYNC#
HSYNC#
CDAC
YDAC
UDAC
VDAC
VREF
COMP
RSET
AUX[7:0]
RESET#
XIN
XOUT

# SYSTEM BLOCK DIAGRAM

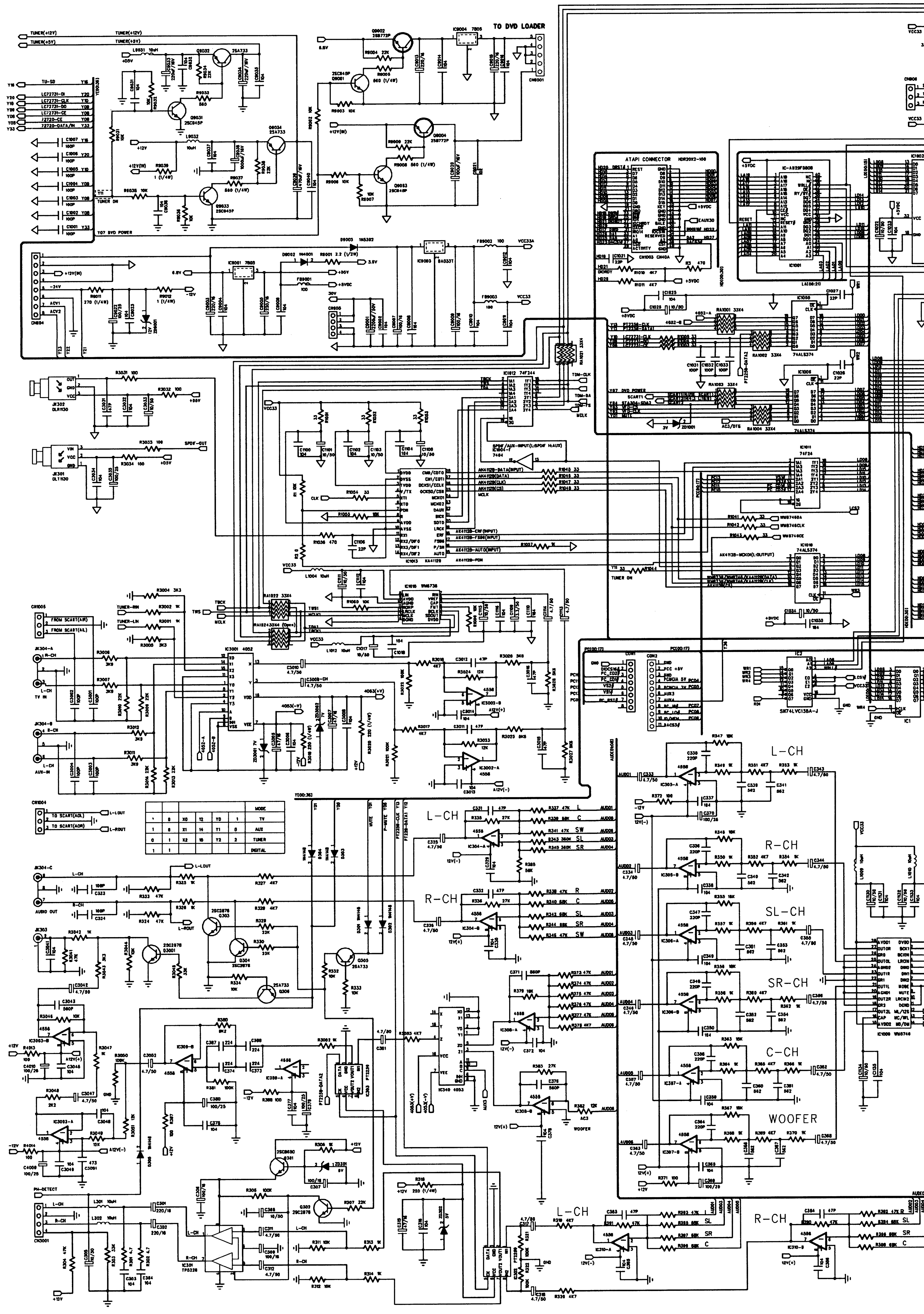

POWER BOARD
POWER
+30V
+12V
+6.8V
-24V
STB
TUNER
AUX INPUT
TV INPUT
LIN RIN
IC3001 4052
IC1015 MW8738
BCLK
LRCK
DATA
IC1012 74F244
BLCK
LRCK
DATA
DIGITAL IN
IC1003 KA4112B
DIGITAL OUT
KEY BOARD
4.000MHZ CF745
PT6311 FTD1 DRVIER
CF945
VFD DISPLAY
FLASH 39SF020A SST
ESS6028
MPEG II Decoder
DTS Decoder
DOLBY DIGITAL Decoder
DOLBY PROG LOGIC Decoder
WMA Decoder
MP3 Decoder
TV ENCODE
Progressive Scan
u-com
TSD0=L R
TSD1=SR C
TSD2=SL SW
EEPROM 24C02A
4MX16 SDROM
374 I/O
LODER
I/O
PCMCIA
STA304A
STA304A
STA505
STA505
STA505
FL
FR
C
SL
SR
SCART
S-VEDIO
VEDIO OUT
945
SCART 1.2
MW8746
L-CH 4558
R-CH 4558
C-CH 4558
SL-CH 4558
SR-CH 4558
SUB-CH 4558
AUDIO OUT
PT2259
PT5228
PHONE
4053
PT2259
SUB

# MAIN BOARD

TABLE OF CONTENTS

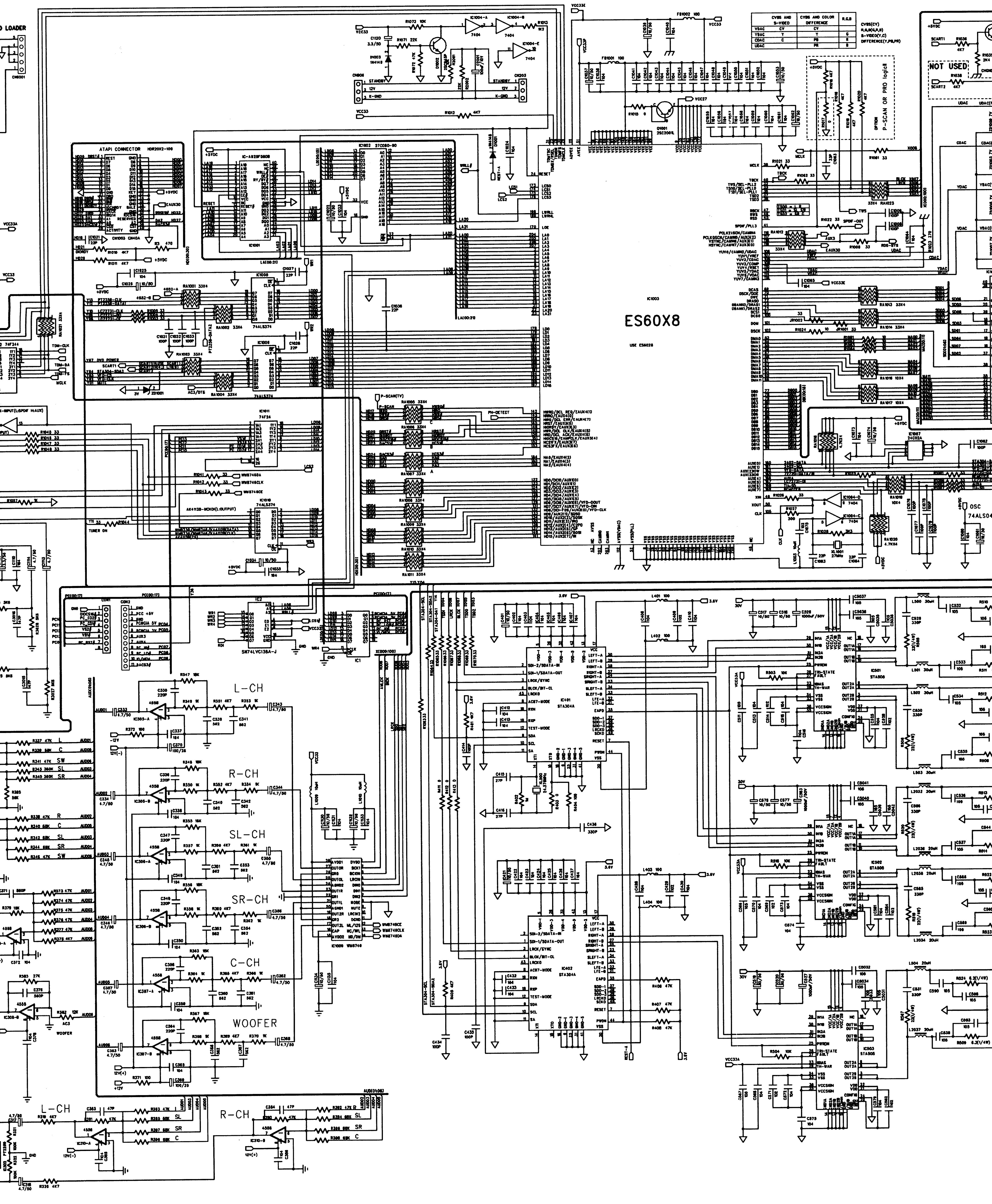
Circuit Diagram ---------- 16-17
Component Layout ---------- 18-19
Part List ---------- 20-27

# CIRCUIT DIAGRAM - MAIN BOARD - 1

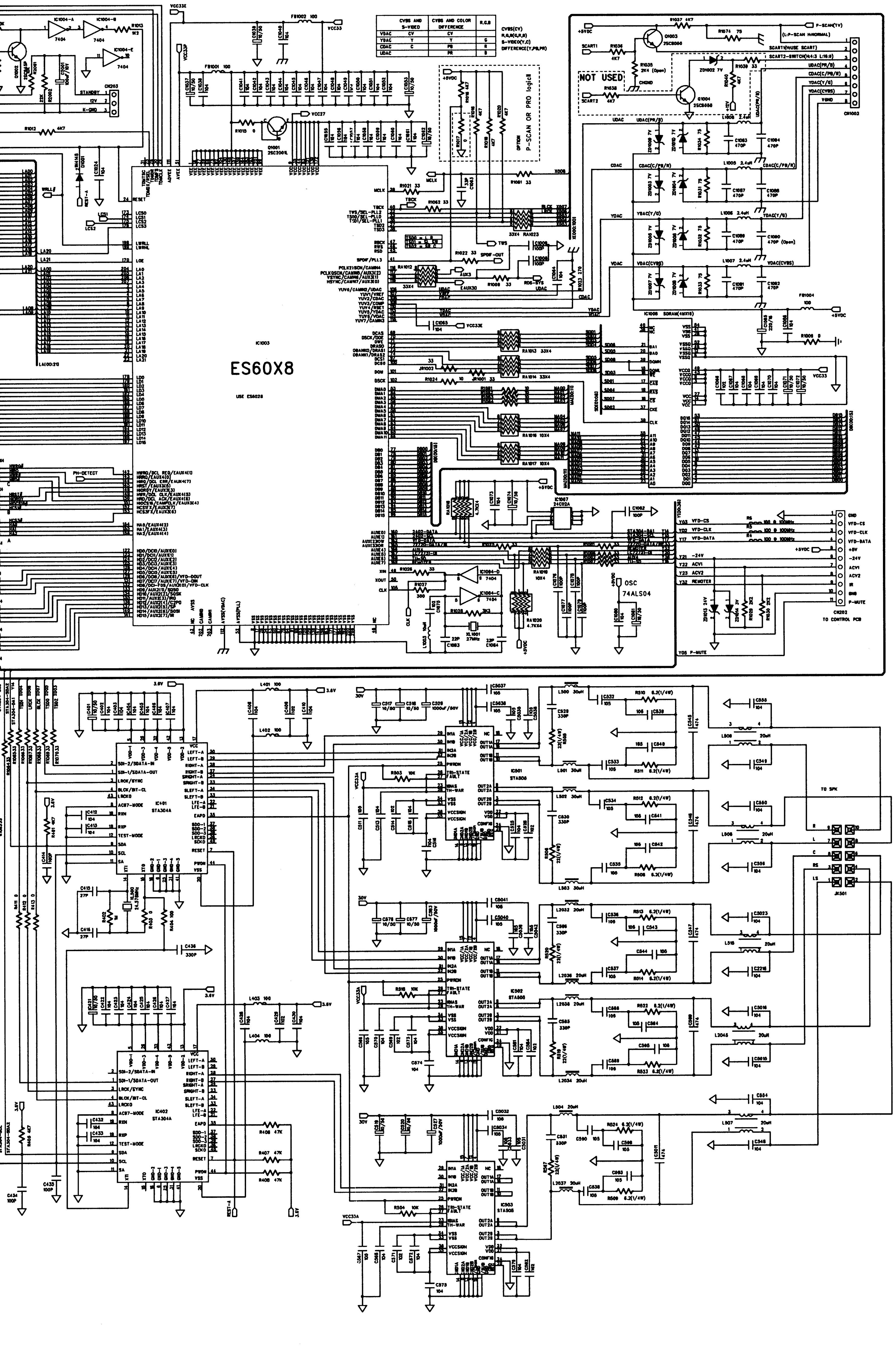


TO DVD LOADER
ATAPI CONNECTOR
TUNER(+12V)
TUNER(+5V)
Y07 DVD POWER
TUNER ON
TO SCART(AOL)
TO SCART(AOR)
FROM SCART(AR)
FROM SCART(AL)
TV IN
AUX-IN
AUDIO OUT
PH-DETECT
JK302 DLR1130
JK301 DLT1130
SPDIF-OUT
L-CH
R-CH
SL-CH
SR-CH
C-CH
WOOFER
IC3001 4052
IC1013 AK4112B
IC1012 74F244
IC1000 74ALS374
IC1006 74ALS374
IC1010 WM8736
IC1009 WM8740
IC301 TPS2226
IC340 4053
SN74LVC138A-J

|  |  |  |  |  |  | MODE |
|---|---|---|---|---|---|---|
| [illegible] | 0 | X0 | 12 | Y0 | 1 | TV |
| 1 | 0 | X1 | 14 | Y1 | 5 | AUX |
| 0 | 1 | X2 | 15 | Y2 | 2 | TUNER |
| 1 | 1 |  |  |  |  | DIGITAL |


LOADER
CN6001
ATAPI CONNECTOR
IC-AM29F080B
IC1001
IC1002 27C080-90
IC1003
ES60X8
USE ES6028
IC1004-A
IC1004-B
IC1004-E
7404
CN906
CN203
STANDBY
12V
K-GND
VCC33
VCC33E
VCC27
Q1001
2SC2001L
IC1005
74ALS374
IC1006
74ALS374
IC1011
74F244
IC1010
74ALS374
AK4113B-MCKO(I:OUTPUT)
TUNER ON
P-SCAN(TV)
PH-DETECT
WM8746CE
WM8746CLK
WM8746DA
TDM-CLK
TDM-DA
TDM-FS
MCLK
IC2
SN74LVC138A-J
IC1
CON1
CON2
L-CH
R-CH
SL-CH
SR-CH
C-CH
WOOFER
IC1009 WM8746
IC305-A
IC305-B
IC306-A
IC306-B
IC307-A
IC307-B
IC308-B
IC310-A
IC310-B
4558
IC401
STA304A
IC402
STA304A
IC501
STA506
IC502
STA506
IC503
STA506
NOT USED
OPTION
P-SCAN OR PRO logicII
CVBS(CV)
R,G,B(G,R,B)
S-VIDEO(Y,C)
DIFFERENCE(Y,PB,PR)
IC1007
24C02A
IC1004-D
IC1004-C
X1001
27MHz
OSC
74ALS04
3.6V
30V
VCC33A

|  | CVBS AND S-VIDEO | CVBS AND COLOR DIFFERENCE | R.G.B |
|---|---|---|---|
| VDAC | CV | CV |  |
| YDAC | Y | Y | G |
| CDAC | C | PB | R |
| UDAC |  | PR | B |

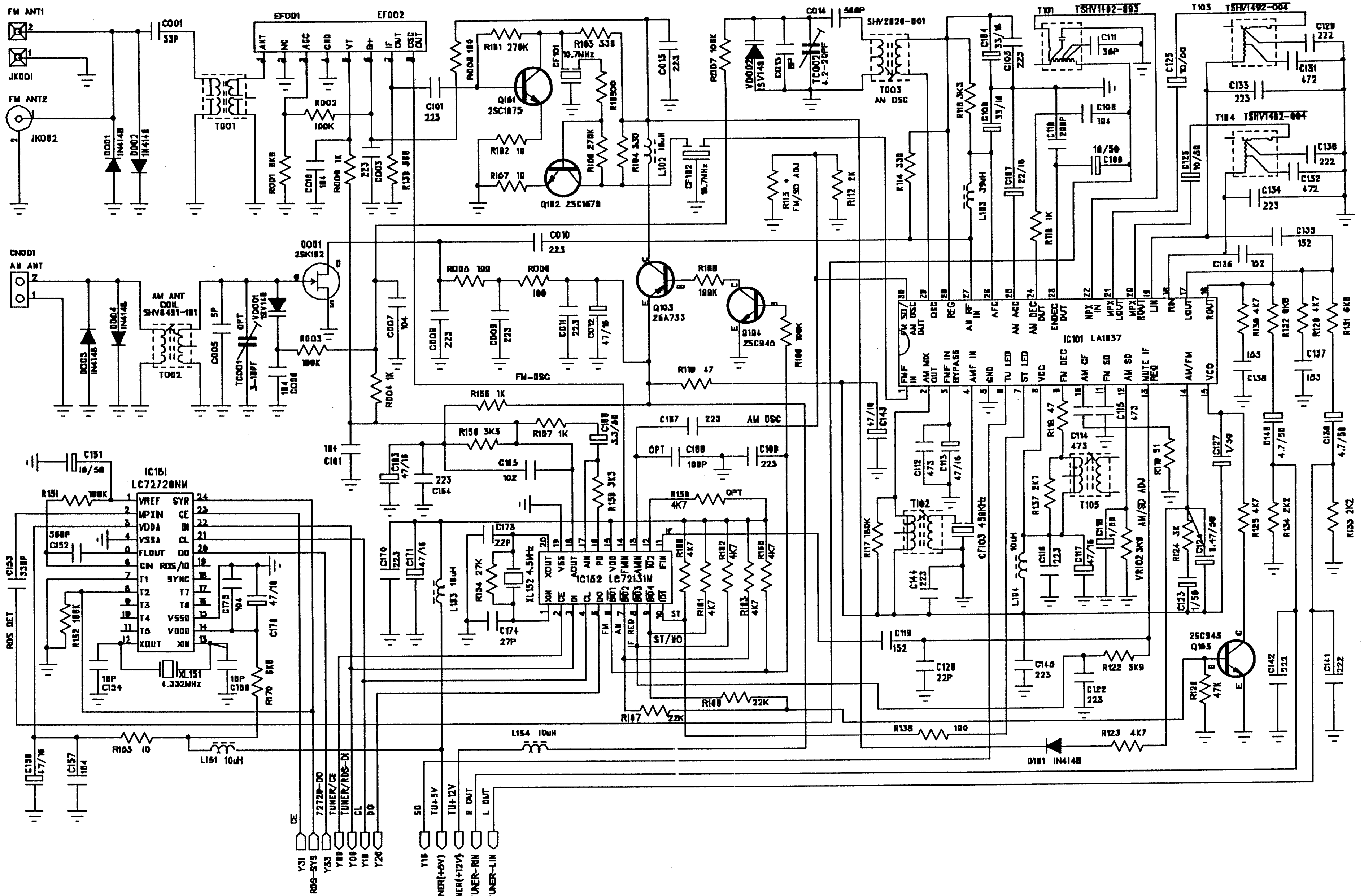


ES60X8
IC1003
USE ES6028
IC1008 SDRAM(4Mx16)
IC1007 24C02A
OSC
74ALS04
NOT USED
P-SCAN OR PRO logicII
OPTION
CH1002
CH202
TO CONTROL PCB
IC401
STA304A
IC402
STA304A
IC501
STA508
IC502
STA508
IC503
STA508
TO SPK
JK501
CH203
STANDBY
12V
K-GND
VCC33
VCC33E
+5VDC
30V
3.6V

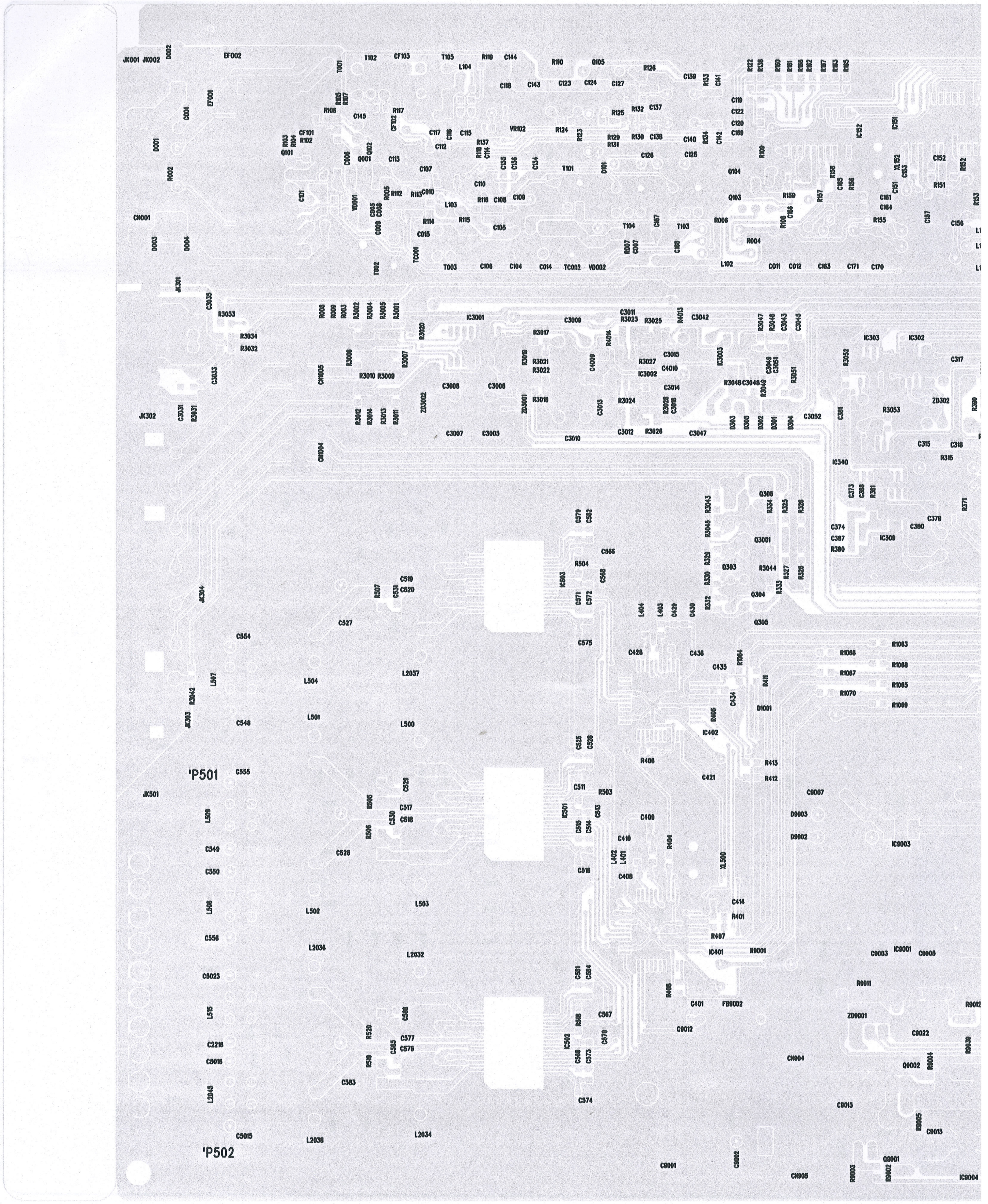
|  | CVBS AND S-VIDEO | CVBS AND COLOR DIFFERENCE | R.G.B |
|---|---|---|---|
| VDAC | CV | CV |  |
| YDAC | Y | Y | G |
| CDAC | C | PB | R |
| UDAC |  | PR | B |

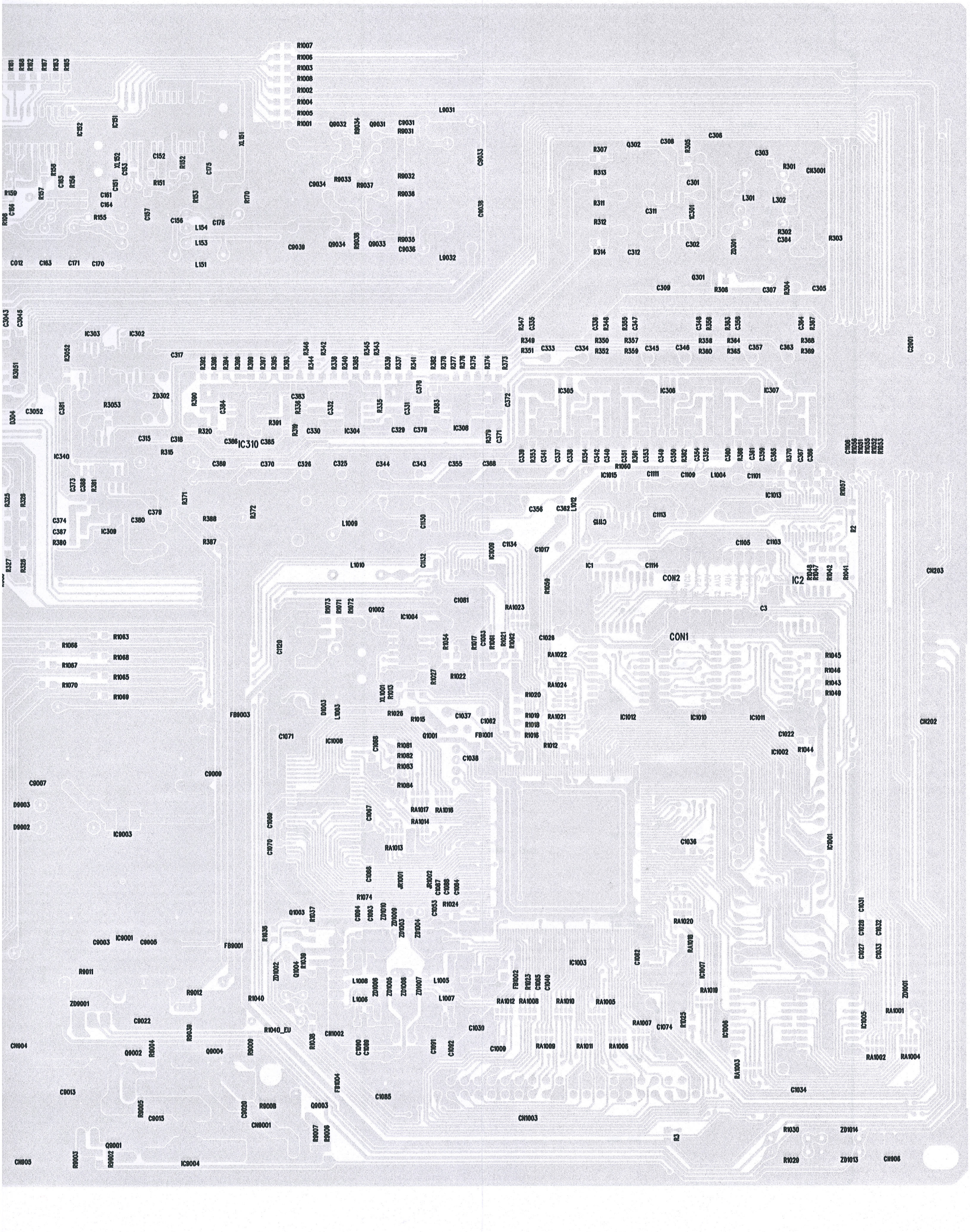
CVBS(CV)
R,G,B(G,R,B)
S-VIDEO(Y,C)
DIFFERENCE(Y,PB,PR)

# CIRCUIT DIAGRAM - MAIN BOARD - 2

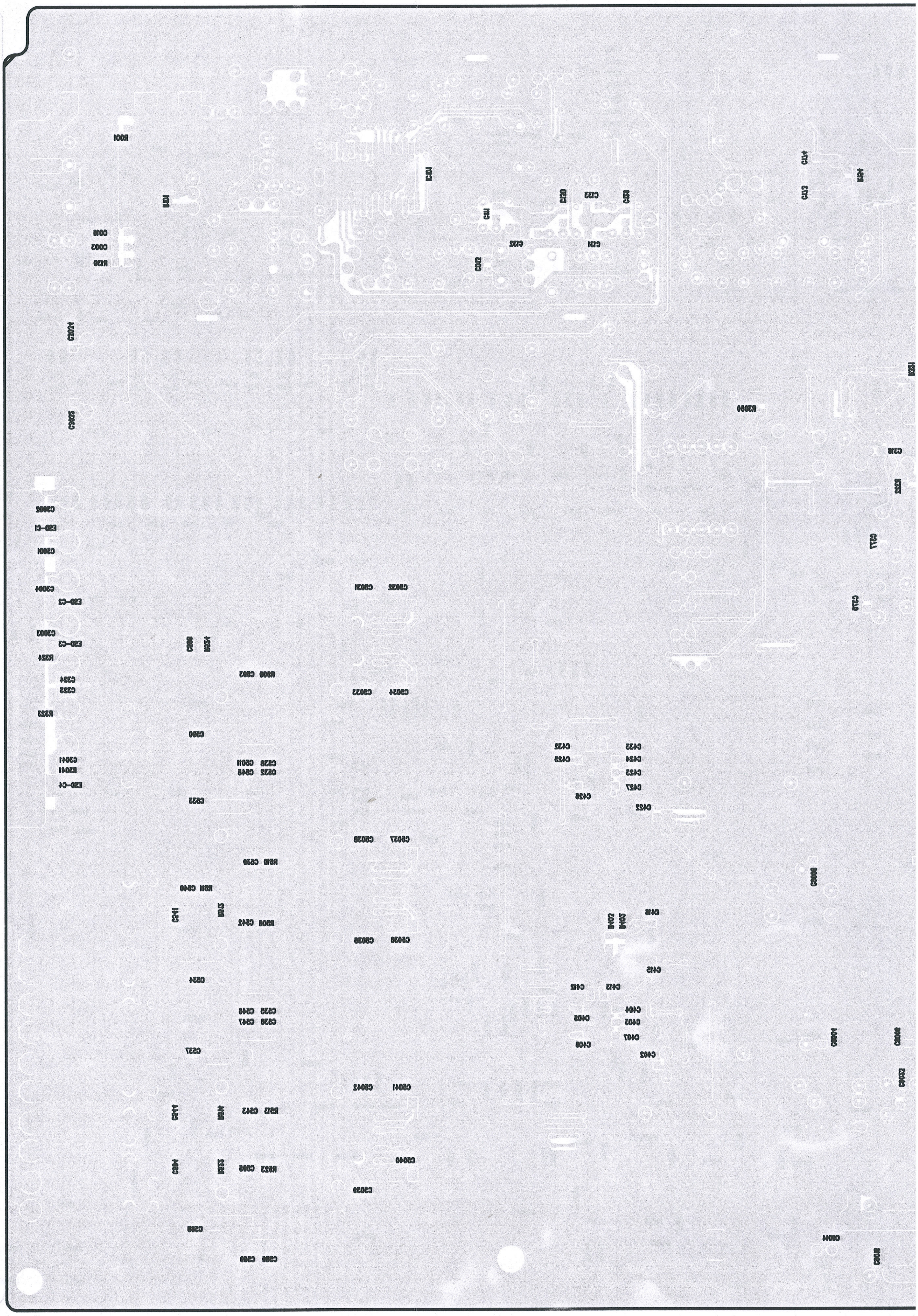

FM ANT1
JK001
FM ANT2
JK002
C001 33P
EF001
EF002
T001
R002 100K
R001 8K8
C016 104
R008 1K
C003 223
R139 560
C101 223
R003 180
R101 270K
CF101 10.7MHz
R103 330
Q101 2SC1675
R102 10
R107 10
Q102 2SC1675
R106 270K
R105 330
R104 330
L102 10uH
CF102 10.7MHz
C015 223
R007 100K
VD002 SV149
C013 8P
TC002 4.2-20PF
C014 560P
SHV2826-001
T003 AM OSC
R113 FM/SD ADJ
R112 2K
R114 330
L103 39uH
R110 3K3
C104 33/16
C105 223
C106 33/16
C107 22/16
T101 TSHV1492-003
C111 30P
C110 200P
C108 104
C109 10/50
R118 1K
T103 TSHV1492-004
C129 222
C131 472
C133 223
C125 10/50
T104 TSHV1492-004
C130 222
C132 472
C134 223
C126 10/50
C135 152
C136 102
CN001
AM ANT
D003 IN4148
D004 IN4148
AM ANT COIL SHV8491-181
T002
C005 5P
TC001 3-10PF
VD001 SV149
Q001 2SK192
R003 100K
C006 104
C010 223
C007 104
R005 100
R006 100
C008 223
C009 223
C011 223
C012 47/16
FM-OSC
R004 1K
C101 104
Q103 2SA733
R108 100K
Q104 2SC945
R109 100K
R111 47
IC101 LA1837
R130 4K7
R132 8K8
R129 4K7
R131 6K8
C138 103
C137 103
C143 47/16
C112 473
C113 47/16
T102
R117 100K
CF103 450KHz
C144 223
R119 47
C114 473
C115 473
T105
R127 2K7
R116 51
L104 10uH
C118 223
C117 47/16
C116 1/50
VR102 3K9 AM/SD ADJ
R124 3K
C124 0.47/50
C123 1/50
C127 1/50
R125 4K7
R134 2K2
C140 4.7/50
C139 4.7/50
R133 2K2
C119 152
C120 22P
C146 223
C122 223
R122 3K9
2SC945 Q105
R126 47K
C142 222
C141 222
R138 100
D101 IN4148
R123 4K7
C151 10/50
IC151 LC72720NM
VREF SYR CE DI CL DO RDS/ID SYNC T8 T7 T6 VSSO VDDD XIN XOUT T4 T3 T2 T1 FLOUT VSSA VDDA MPXIN
R151 100K
C152 560P
C153 330P
RDS DET
R152 100K
C154 18P
XL151 4.332MHz
C155 18P
R170 6K8
C175 104
C176 47/16
R153 10
L151 10uH
C158 47/16
C157 104
R155 1K
R156 3K3
R157 1K
C180 3.3/50
C183 47/16
C184 223
C185 102
R159 3K3
C187 223 AM OSC
OPT
C188 100P
C189 223
R158 4K7 OPT
C173 22P
XL152 4.5MHz
R154 27K
C174 27P
IC152 LC72131M
R160 4K7
R161 4K7
R162 4K7
R163 4K7
R150 4K7
ST/MO
C170 223
C171 47/16
L153 10uH
R166 22K
R167 22K
L154 10uH
CE 72720-DO TUNER/CE TUNER/RDS-DI CL DO
Y31 RDS-SYS Y33 Y08 Y09 Y18 Y20
SD TU+5V TU+12V R OUT L OUT
Y19 TUNER(+5V) TUNER(+12V) TUNER-RIN TUNER-LIN

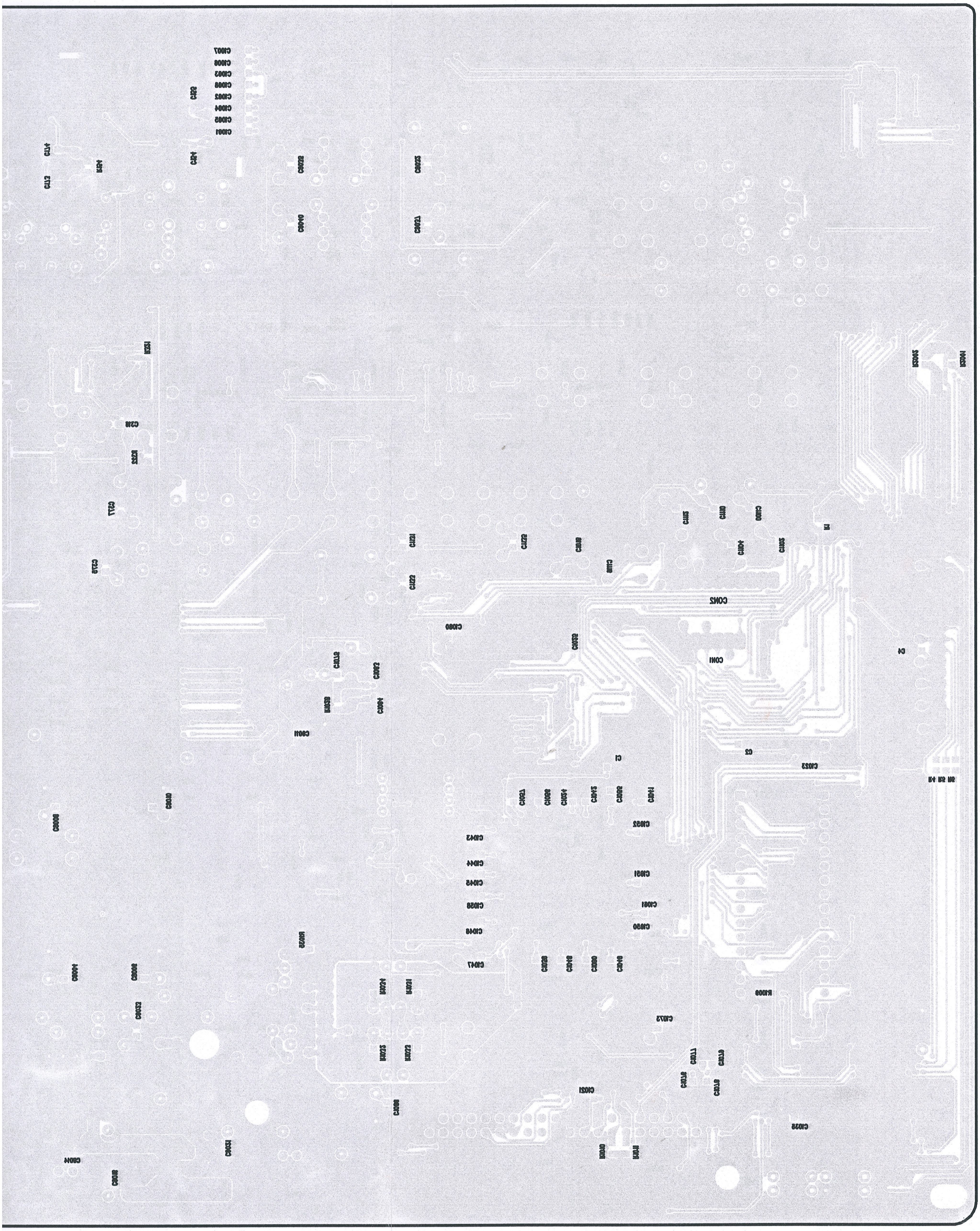
# COMPONENT LAYOUT - MAIN BOARD(TOP VIEW)


JK001
JK002
D002
EF002
T001
T102
CF103
T105
L104
R119
C144
R110
Q105
R126
C139
R133
C141
R122
R138
R160
R161
R168
R162
R167
R163
R165
EF001
C001
C118
C143
C123
C124
C127
R105
R107
R106
C145
R117
CF102
R125
R132
C137
C119
C122
C120
C169
C117
C116
C115
VR102
R124
R123
R129
R131
R130
C138
C140
C125
R134
C142
IC152
IC151
D001
R103
R104
CF101
R102
Q101
C006
Q102
Q001
C113
C112
R137
R119
C114
C135
C136
C134
T101
D101
C126
R109
Q104
R158
C165
R156
XL152
C151
C153
C152
R152
R002
C101
VD001
C107
C110
R005
R112
R113
C010
L103
R116
C108
C109
Q103
R159
R157
C161
C164
R151
C157
C156
R153
CN001
C005
C008
C009
R114
R115
C015
C105
T104
C167
T103
R006
R108
C166
R155
D003
D004
R004
R007
C007
C168
TC001
T002
T003
C106
C104
C014
TC002
VD002
L102
C011
C012
C163
C171
C170
JK301
C3035
R3033
R3034
R3032
R008
R009
R003
R3002
R3004
R3005
R3001
R3020
IC3001
C3009
C3011
R3023
R3025
R4013
C3042
R3047
R3046
C3043
C3045
IC303
IC302
R3017
R4014
C3015
R3052
C317
C3033
CN1005
R3008
R3010
R3009
R3007
R3019
R3021
R3022
C4009
R3027
C4010
IC3002
IC3003
C3049
C3051
R3051
C3008
C3006
C3014
R3048
C3048
R3049
JK302
C3031
R3031
R3012
R3014
R3013
R3011
ZD3002
ZD3001
R3018
C3013
R3024
R3028
C3016
D303
D305
D302
D301
D304
C3052
C391
R3053
ZD302
R390
C3007
C3005
C3010
C3012
R3026
C3047
C315
C318
R315
CN1004
IC340
C373
C388
R381
Q306
R334
R325
R326
R3043
C579
C582
R371
C378
C374
C387
R380
C380
IC309
R3045
Q3001
C566
R504
R329
Q303
R3044
R327
R328
C519
C520
R507
C531
IC503
C568
R330
R333
C571
C572
Q304
JK304
L404
L403
C429
C430
R332
Q305
C527
C554
C575
C428
C436
R1064
C435
R1066
R1063
R1067
R1068
R1065
R1070
R1069
L507
L504
L2037
R411
R3042
C434
D1001
JK303
C548
L501
L500
R405
IC402
C525
C528
R406
R413
R412
P501
C555
C529
C421
JK501
C511
R503
C9007
R505
C517
C518
C530
IC501
C515
C514
C513
C409
D9003
L509
R506
C410
R404
D9002
IC9003
C549
C526
L402
L401
XL500
C550
C516
C408
L508
L502
L503
C414
R401
C556
L2036
L2032
R407
IC401
R9001
C9003
IC9001
C9005
C5023
C501
C504
R9011
R408
C401
FB9002
R9012
L515
C508
C567
ZD9001
R520
R518
C570
C9012
C577
C578
C585
C9022
C2216
C5016
R519
IC502
C569
C573
CN904
Q9002
R9004
R9038
C583
L2045
C574
C9013
R9005
C9015
C5015
L2038
L2034
P502
C9001
C9002
Q9001
CN905
R9003
R9002
IC9004


R1007
R1006
R1003
R1008
R1002
R1004
R1005
R1001
Q9032
R9034
Q9031
C9031
R9031
L9031
C9033
C9034
R9033
R9037
R9032
R9036
C9038
C9039
Q9034
R9038
Q9033
R9035
C9036
L9032
IC152
IC151
XL151
C152
R152
C175
XL152
C153
C151
R151
C161
C164
R155
C157
C156
R153
R170
L154
C176
L153
L151
R159
R157
R158
C163
C012
C171
C170
R307
Q302
C308
R305
C306
C303
R301
CN3001
R313
C301
R311
C311
IC301
L301
L302
R312
R302
C304
R303
R314
C312
C302
ZD301
Q301
C309
R306
C307
R304
C305
C3043
C3045
IC303
IC302
R3052
C317
R3051
ZD302
R3053
C3052
C381
D304
R390
R320
C384
C383
R336
C332
R335
C331
C376
R383
C372
R391
R319
C330
IC304
C329
C378
IC308
R379
C371
C315
C318
R315
C386
IC310
C385
IC340
C369
C370
C326
C325
C344
C343
C355
C368
R347
C335
R349
R351
C333
C334
R350
R352
R357
R359
C345
C346
R358
R360
R364
R365
C357
C363
R368
R369
C2001
IC305
IC306
IC307
R1060
IC1015
C1111
C1109
L1004
C1101
IC1013
R1057
B2
C373
C389
R381
R325
R326
C374
C387
R380
C380
C379
IC309
R371
R388
R387
R372
L1009
C1130
C356
C362
L1012
C1113
C1115
C1105
C1103
C1134
C1017
IC1009
L1010
C1132
IC1
C1114
CON2
IC2
R1042
R1041
CN203
R327
R328
R1059
R1073
R1071
R1072
Q1002
C1081
RA1023
IC1004
C3
R1066
R1063
R1068
R1067
R1065
R1070
R1069
C1120
R1054
R1017
C1083
R1061
R1021
R1062
C1026
CON1
RA1022
R1045
R1046
R1043
R1049
R1027
R1022
RA1024
R1020
XL1001
R1013
FB9003
D1003
L1003
R1026
R1015
C1037
C1062
R1019
R1018
R1016
RA1021
IC1012
IC1010
IC1011
CN202
C1071
IC1008
C1068
Q1001
FB1001
R1081
R1082
R1083
R1012
C1038
C1022
IC1002
R1044
C9009
C9007
D9003
D9002
IC9003
R1084
C1069
C1070
C1067
RA1017
RA1016
RA1014
RA1013
C1036
IC1001
C1066
JR1001
JR1002
C1087
C1088
C1064
R1074
R1024
C1053
Q1003
R1037
C1094
C1093
ZD1010
ZD1009
ZD1003
ZD1004
C1031
RA1020
C1028
C1032
C1027
C1033
C9003
IC9001
C9005
FB9001
R1036
ZD1002
Q1004
R1039
RA1018
IC1003
C1082
IC1007
R9011
L1008
L1006
ZD1006
ZD1005
ZD1008
ZD1007
L1005
L1007
FB1002
R1023
C1065
C1040
RA1019
ZD1001
R9012
R1040
ZD9001
RA1012
RA1008
RA1010
RA1005
RA1001
C9022
R9010
R1040_EU
CN1002
C1030
RA1007
C1074
R1025
IC1006
IC1005
CN904
Q9002
R9004
Q9004
R9009
R1038
C1090
C1089
C1091
C1092
C1009
RA1009
RA1011
RA1006
RA1002
RA1004
RA1003
C9013
FB1004
C1085
C1034
R9005
C9020
R9008
Q9003
C9015
CN9001
CN1003
R1030
ZD1014
R9007
R9006
R3
Q9001
CN905
R9003
R9002
IC9004
R1029
ZD1013
CN906

# COMPONENT LAYOUT - MAIN BOARD(BOTTOM VIEW)





# PART LIST - MAIN BOARD

CHIP CAPACITORS

| | | | |
|---|---|---|---|
| C003 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C006 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C008 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C009 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C010 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C013 | PYL410370-8090 | CHIP CAP | 8 pF 50V 5% |
| C016 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1001 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1002 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1003 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1004 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1005 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1006 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1007 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1008 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1009 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1018 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1021 | PYL410370-2200 | CHIP CAP | 22 pF 50V 5% |
| C1023 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1024 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1025 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1027 | PYL410370-2200 | CHIP CAP | 22 pF 50V 5% |
| C1028 | PYL410370-2200 | CHIP CAP | 22 pF 50V 5% |
| C1031 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1032 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1033 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1036 | PYL410370-3000 | CHIP CAP | 30 pF 50V 5% |
| C1038 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1040 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1041 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1042 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1043 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1044 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1045 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1046 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1047 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1048 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1049 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C105 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C1050 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1051 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1052 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1055 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1056 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1057 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1058 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1059 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1060 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1061 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1063 | PYL410370-3300 | CHIP CAP | 33 pF 50V 5% |
| C1064 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1065 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1066 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |
| C1067 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1068 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1069 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1070 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1073 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1075 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |
| C1076 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1077 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1078 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1079 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C108 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1080 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |

CHIP CAPACITORS

| | | | |
|---|---|---|---|
| C1082 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C1083 | PYL410370-2200 | CHIP CAP | 22 pF 50V 5% |
| C1084 | PYL410370-2200 | CHIP CAP | 22 pF 50V 5% |
| C1086 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1087 | PYL410370-4710 | CHIP CAP | 470 pF 50 V 5% |
| C1088 | PYL410370-4710 | CHIP CAP | 470 pF 50 V 5% |
| C1089 | PYL410370-4710 | CHIP CAP | 470 pF 50 V 5% |
| C1091 | PYL410370-4710 | CHIP CAP | 470 pF 50 V 5% |
| C1092 | PYL410370-4710 | CHIP CAP | 470 pF 50 V 5% |
| C1093 | PYL410370-4710 | CHIP CAP | 470 pF 50 V 5% |
| C1094 | PYL410370-4710 | CHIP CAP | 470 pF 50 V 5% |
| C110 | PYL410370-2010 | CHIP CAP | 200 pF 50V 5% |
| C1100 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1102 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1104 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1106 | PYL410370-2200 | CHIP CAP | 22 pF 50V 5% |
| C111 | PYL410370-3000 | CHIP CAP | 30 pF 50V 5% |
| C1110 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1112 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1116 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C112 | PYL439570-4730 | CHIP CAP | 0.047 uF 50V 20% |
| C1131 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1133 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C1135 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C114 | PYL439570-4730 | CHIP CAP | 0.047 uF 50V 20% |
| C115 | PYL439570-4730 | CHIP CAP | 0.047 uF 50V 20% |
| C116 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C119 | PYL456470-1520 | CHIP CAP | 1500 pF 50V 10% |
| C120 | PYL410370-2200 | CHIP CAP | 22 pF 50V 5% |
| C122 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C129 | PYL456470-2220 | CHIP CAP | 0.0022uF 50V 10% |
| C130 | PYL456470-2220 | CHIP CAP | 0.0022uF 50V 10% |
| C131 | PYL456470-4720 | CHIP CAP | 0.0047 uF 50V 10% |
| C132 | PYL456470-4720 | CHIP CAP | 0.0047 uF 50V 10% |
| C133 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C134 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C135 | PYL456470-1520 | CHIP CAP | 1500 pF 50V 10% |
| C136 | PYL456470-1520 | CHIP CAP | 1500 pF 50V 10% |
| C137 | PYL456470-1530 | CHIP CAP | 0.015 uF 50V 10% |
| C138 | PYL456470-1530 | CHIP CAP | 0.015 uF 50V 10% |
| C141 | PYL456470-2220 | CHIP CAP | 0.0022uF 50V 10% |
| C142 | PYL456470-2220 | CHIP CAP | 0.0022uF 50V 10% |
| C144 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C145 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C152 | PYL410370-5610 | CHIP CAP | 560 pF 50 V 5% |
| C153 | PYL410370-3310 | CHIP CAP | 330 pF 50V 5% |
| C154 | PYL410370-1500 | CHIP CAP | 15 pF 50V 5% |
| C155 | PYL410370-1500 | CHIP CAP | 15 pF 50V 5% |
| C157 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C161 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C164 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C165 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |
| C169 | PYL439570-2230 | CHIP CAP | 0.022 uF 50V 20% |
| C173 | PYL410370-2200 | CHIP CAP | 22 pF 50V 5% |
| C174 | PYL410370-2700 | CHIP CAP | 27 pF 50V 5% |
| C175 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3001 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C3002 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C3003 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C3004 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C3006 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3008 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3011 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C3012 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C3013 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3014 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |

CHIP CAPACITORS

| | | | |
|---|---|---|---|
| C3015 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C3016 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C303 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3031 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C3032 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3034 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C304 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3041 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3043 | PYL410370-5610 | CHIP CAP | 560 pF 50 V 5% |
| C3045 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3048 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3049 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C3051 | PYL439570-4730 | CHIP CAP | 0.047 uF 50V 20% |
| C316 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C323 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C324 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C329 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C330 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C331 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C332 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C335 | PYL410370-2210 | CHIP CAP | 220 pF 50V 5% |
| C336 | PYL410370-2210 | CHIP CAP | 220 pF 50V 5% |
| C337 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C338 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C339 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C340 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C341 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C342 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C347 | PYL410370-2210 | CHIP CAP | 220 pF 50V 5% |
| C348 | PYL410370-2210 | CHIP CAP | 220 pF 50V 5% |
| C349 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C350 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C351 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C352 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C353 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C354 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C358 | PYL410370-2210 | CHIP CAP | 220 pF 50V 5% |
| C359 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C360 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C361 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C364 | PYL410370-2210 | CHIP CAP | 220 pF 50V 5% |
| C365 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C366 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C367 | PYL456470-5620 | CHIP CAP | 0.0056 uF 50V 10% |
| C371 | PYL410370-5610 | CHIP CAP | 560 pF 50 V 5% |
| C372 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C373 | PYL456470-2240 | CHIP CAP | 0.22 uF 50V 10% |
| C374 | PYL456470-2240 | CHIP CAP | 0.22 uF 50V 10% |
| C375 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C376 | PYL410370-5610 | CHIP CAP | 560 pF 50 V 5% |
| C377 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C378 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C383 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C384 | PYL410370-4700 | CHIP CAP | 47 pF 50V 5% |
| C385 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C386 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C387 | PYL456470-2240 | CHIP CAP | 0.22 uF 50V 10% |
| C388 | PYL456470-2240 | CHIP CAP | 0.22 uF 50V 10% |
| C402 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C403 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C404 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C405 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C406 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C407 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C408 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C409 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |

CHIP CAPACITORS

| | | | |
|---|---|---|---|
| C410 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C412 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C413 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C414 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C415 | PYL410370-2700 | CHIP CAP | 27 pF 50V 5% |
| C416 | PYL410370-2700 | CHIP CAP | 27 pF 50V 5% |
| C422 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C423 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C424 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C425 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C426 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C427 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C428 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C429 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |
| C430 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C432 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C433 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C434 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C435 | PYL410370-1010 | CHIP CAP | 100 pF 50V 5% |
| C436 | PYL410370-1510 | CHIP CAP | 150 pF 50 V 5% |
| C5011 | PZL439650-4740 | CHIP CAP | 0.47uF 25V +80-20% |
| C5031 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5032 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5033 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5034 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5035 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5036 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5037 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5038 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5039 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5040 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5041 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C5042 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C511 | PYL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C513 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C514 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |
| C515 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C516 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C525 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C528 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |
| C529 | PYL410370-3310 | CHIP CAP | 330 pF 50V 5% |
| C530 | PYL410370-3310 | CHIP CAP | 330 pF 50V 5% |
| C531 | PYL410370-3310 | CHIP CAP | 330 pF 50V 5% |
| C532 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C533 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C534 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C535 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C536 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C537 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C538 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C539 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C540 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C541 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C542 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C543 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C544 | PZL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C545 | PZL439650-4740 | CHIP CAP | 0.47uF 25V +80-20% |
| C546 | PZL439650-4740 | CHIP CAP | 0.47uF 25V +80-20% |
| C547 | PZL439650-4740 | CHIP CAP | 0.47uF 25V +80-20% |
| C566 | PYL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C567 | PYL456450-1050 | CHIP CAP | 1uF 25V 10% |
| C568 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C569 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |
| C570 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |
| C571 | PYL410370-1020 | CHIP CAP | 1000 pF 50 V 5% |
| C572 | PYL456470-1040 | CHIP CAP | 0.1 uF 50V 10% |

## CHIP CAPACITORS

| | | |
|---|---|---|
| C573 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C574 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C575 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C579 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C581 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C582 | PYL410370-1020 | CHIP CAP 1000 pF 50 V 5% |
| C584 | PYL410370-1020 | CHIP CAP 1000 pF 50 V 5% |
| C585 | PYL410370-3310 | CHIP CAP 330 pF 50V 5% |
| C586 | PYL410370-3310 | CHIP CAP 330 pF 50V 5% |
| C588 | PZL456450-1050 | CHIP CAP 1uF 25V 10% |
| C589 | PZL456450-1050 | CHIP CAP 1uF 25V 10% |
| C590 | PZL456450-1050 | CHIP CAP 1uF 25V 10% |
| C593 | PZL456450-1050 | CHIP CAP 1uF 25V 10% |
| C594 | PZL456450-1050 | CHIP CAP 1uF 25V 10% |
| C595 | PZL456450-1050 | CHIP CAP 1uF 25V 10% |
| C598 | PZL456450-1050 | CHIP CAP 1uF 25V 10% |
| C599 | PZL439650-4740 | CHIP CAP 0.47uF 25V +80-20% |
| C9004 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9006 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9008 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9011 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9012 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9014 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9016 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9021 | PYL410370-1020 | CHIP CAP 1000 pF 50 V 5% |
| C9023 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9031 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9032 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9035 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9036 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9037 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C9040 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| ESDC1 | PYL410370-1020 | CHIP CAP 1000 pF 50 V 5% |
| ESDC2 | PYL410370-1020 | CHIP CAP 1000 pF 50 V 5% |
| ESDC3 | PYL410370-1020 | CHIP CAP 1000 pF 50 V 5% |
| ESDC4 | PYL410370-1020 | CHIP CAP 1000 pF 50 V 5% |

## CAPACITORS

| | | |
|---|---|---|
| C001 | PRD113370-3300 | COND DISC 33 pF 50V 5% |
| C005 | PRD113870-5090 | COND DISC 5 pF 50V +-0.25pF |
| C007 | PRD339670-1040 | COND DISC 0.1 uF 50V +80-20% |
| C011 | PRD249670-2230 | COND DISC 0.022 uF 50V +80- |
| C012 | PRE939540-4700 | COND ELECT 47 uF 16V 20% |
| C014 | PVP026370-5610 | COND POLY 560pF 50V 5% |
| C015 | PRD249670-2230 | COND DISC 0.022 uF 50V +80- |
| C0306 | PRE039540-1010 | COND ELECT 100 uF 16 V 20% |
| C101 | PRD249670-2230 | COND DISC 0.022 uF 50V +80- |
| C1017 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1022 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1026 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1034 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1037 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1039 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C104 | PRE939530-3300 | COND ELECT 33 uF 10V 20% |
| C1053 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C106 | PRE939530-3300 | COND ELECT 33 uF 10V 20% |
| C1062 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C107 | PRE939540-2200 | COND ELECT 22 uF 16V 20% |
| C1071 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1074 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1081 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1085 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C109 | PRE939540-1000 | COND ELECT 10 uF 16V 20% |
| C1101 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1103 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1105 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |

## CAPACITORS

| | | |
|---|---|---|
| C1109 | PRE039570-3390 | COND ELECT 3.3 uF 50V 20% |
| C1111 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1113 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C1114 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C1115 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1120 | PRE039570-3390 | COND ELECT 3.3 uF 50V 20% |
| C113 | PRE939540-4700 | COND ELECT 47 uF 16V 20% |
| C1130 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1132 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1134 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C117 | PRE939540-4700 | COND ELECT 47 uF 16V 20% |
| C118 | PRE939570-1090 | COND ELECT 1 uF 50V 20% |
| C123 | PRE939570-1090 | COND ELECT 1 uF 50V 20% |
| C124 | PRE939570-4780 | COND ELECT 0.47 uF 50V 20% |
| C125 | PRE939540-1000 | COND ELECT 10 uF 16V 20% |
| C126 | PRE939540-1000 | COND ELECT 10 uF 16V 20% |
| C127 | PRE939570-1090 | COND ELECT 1 uF 50V 20% |
| C139 | PRE939540-4790 | COND ELECT 4.7 uF 16V 20% |
| C140 | PRE939540-4790 | COND ELECT 4.7 uF 16V 20% |
| C143 | PRE939540-4700 | COND ELECT 47 uF 16V 20% |
| C151 | PRE939540-1000 | COND ELECT 10 uF 16V 20% |
| C156 | PRE939540-4700 | COND ELECT 47 uF 16V 20% |
| C163 | PRE939540-4700 | COND ELECT 47 uF 16V 20% |
| C166 | PRE939540-3390 | COND ELECT 3.3 uF 16V 20% |
| C167 | PRD249670-2230 | COND DISC 0.022 uF 50V +80- |
| C170 | PRD249670-2230 | COND DISC 0.022 uF 50V +80- |
| C171 | PRE939540-4700 | COND ELECT 47 uF 16V 20% |
| C176 | PRE939540-4700 | COND ELECT 47 uF 16V 20% |
| C2001 | PRE039530-1010 | COND ELECT 100uF 10V 20% |
| C2216 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C3005 | PRE039540-4700 | COND ELECT 47 uF 16 V 20% |
| C3007 | PRE039540-4700 | COND ELECT 47 uF 16 V 20% |
| C3009 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C301 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C3010 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C302 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C3033 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C3035 | PRE039550-1010 | COND ELECT 100 uF 25 V 20% |
| C3042 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C3047 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C305 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C3052 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C307 | PRE039540-1010 | COND ELECT 100 uF 16 V 20% |
| C308 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C309 | PRE039540-1010 | COND ELECT 100 uF 16 V 20% |
| C311 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C312 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C315 | PRE039540-4700 | COND ELECT 47 uF 16 V 20% |
| C317 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C318 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C325 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C326 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C333 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C334 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C343 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C344 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C345 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C346 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C355 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C356 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C357 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C362 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C363 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C368 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C369 | PRE039550-1010 | COND ELECT 100 uF 25 V 20% |
| C370 | PRE039550-1010 | COND ELECT 100 uF 25 V 20% |

## CAPACITORS

| | | |
|---|---|---|
| C379 | PRE039550-1010 | COND ELECT 100 uF 25 V 20% |
| C380 | PRE039550-1010 | COND ELECT 100 uF 25 V 20% |
| C381 | PRE039570-4790 | COND ELECT 4.7 uF 50V 20% |
| C4009 | PRE039550-1010 | COND ELECT 100 uF 25 V 20% |
| C401 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C4010 | PRE039550-1010 | COND ELECT 100 uF 25 V 20% |
| C421 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C5015 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C5016 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C5023 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C517 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C518 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C519 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C520 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C526 | PDE039570-1020 | COND ELECT 1000uF 50V 20% 85'C MINI SIZE |
| C527 | PDE039570-1020 | COND ELECT 1000uF 50V 20% 85'C MINI SIZE |
| C548 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C549 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C550 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C554 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C555 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C556 | PRL048570-1040 | COND MULTI 0.1 uF 50V 20% |
| C576 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C577 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C583 | PDE039570-1020 | COND ELECT 1000uF 50V 20% 85'C MINI SIZE |
| C9001 | PVE039570-2220 | COND ELECT 2200 uF 50V 20% |
| C9002 | PRM0373A0-1040 | COND MYLAR 0.1 uF 100V 5% |
| C9003 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C9005 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C9007 | PRE039540-1010 | COND ELECT 100 uF 16 V 20% |
| C9009 | PRE039540-1010 | COND ELECT 100 uF 16 V 20% |
| C9013 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C9015 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C9020 | PRE039540-1010 | COND ELECT 100 uF 16 V 20% |
| C9022 | PRE039550-1010 | COND ELECT 100 uF 25 V 20% |
| C9033 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C9034 | PRE039540-2210 | COND ELECT 220 uF 16 V 20% |
| C9038 | PME039540-1020 | COND ELECT 1000 uF 16V 20% |
| C9039 | PRE039540-4710 | COND ELECT 470 uF 16 V 20% |
| TC001 | MVC001001-0010 | COND TRIM 3 - 10 PF NP0 |
| TC002 | MVC001002-0010 | COND TRIM 4.2 - 20 PF N450 |

## CHIP RESISTORS

| | | |
|---|---|---|
| R001 | QCF015020-6820 | CHIP RES. 6.8K OHM 1/10 W 5% |
| R003 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R008 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R009 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R1 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R1001 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1002 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1003 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1004 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1005 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1006 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1007 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1008 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1009 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R101 | QCF015020-2740 | CHIP RES. 270K OHM 1/10 W 5% |
| R1010 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R1011 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R1012 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R1013 | QCF015020-1220 | CHIP RES. 1.2K OHM 1/10 W 5% |
| R1015 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |

## CHIP RESISTORS

| | | |
|---|---|---|
| R1016 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R1018 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R1019 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R102 | QCF015020-1000 | CHIP RES. 10 OHM 1/10 W 5% |
| R1020 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R1021 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1022 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1023 | QCF015020-2710 | CHIP RES. 270 OHM 1/10 W 5% |
| R1024 | QCF015020-1000 | CHIP RES. 10 OHM 1/10 W 5% |
| R1025 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1026 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1027 | QCF015020-3010 | CHIP RES. 300 OHM 1/10 W 5% |
| R1028 | QCF015020-3320 | CHIP RES. 3.3K OHM 1/10 W 5% |
| R103 | QCF015020-3310 | CHIP RES. 330 OHM 1/10 W 5% |
| R1031 | QCF015020-7500 | CHIP RES. 75 OHM 1/10 W 5% |
| R1032 | QCF015020-7500 | CHIP RES. 75 OHM 1/10 W 5% |
| R1033 | QCF015020-7500 | CHIP RES. 75 OHM 1/10 W 5% |
| R1034 | QCF015020-7500 | CHIP RES. 75 OHM 1/10 W 5% |
| R1036 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R1037 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R104 | QCF015020-3310 | CHIP RES. 330 OHM 1/10 W 5% |
| R1041 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1042 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1043 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1044 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1045 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1046 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1047 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1048 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1049 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R105 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R1051 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1052 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1053 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1054 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1055 | QCF015020-1830 | CHIP RES. 18K OHM 1/10 W 5% |
| R1056 | QCF015020-4710 | CHIP RES. 470 OHM 1/10 W 5% |
| R1057 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R1059 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R106 | QCF015020-2740 | CHIP RES. 270K OHM 1/10 W 5% |
| R1060 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R1061 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1062 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1063 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1064 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1065 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1066 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1067 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1068 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1069 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R107 | QCF015020-1000 | CHIP RES. 10 OHM 1/10 W 5% |
| R1070 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R1071 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R1072 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R1073 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R1074 | QCF015020-7500 | CHIP RES. 75 OHM 1/10 W 5% |
| R108 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R112 | QCF015020-3320 | CHIP RES. 3.3K OHM 1/10 W 5% |
| R113 | QCF015020-3920 | CHIP RES. 3.9K OHM 1/10 W 5% |
| R114 | QCF015020-3310 | CHIP RES. 330 OHM 1/10 W 5% |
| R115 | QCF015020-3320 | CHIP RES. 3.3K OHM 1/10 W 5% |
| R116 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R117 | QCF015020-1840 | CHIP RES. 180K OHM 1/10 W 5% |
| R118 | QCF015020-4700 | CHIP RES. 47 OHM 1/10 W 5% |
| R119 | QCF015020-5100 | CHIP RES. 51 OHM 1/10 W 5% |
| R122 | QCF015020-3920 | CHIP RES. 3.9K OHM 1/10 W 5% |

### CHIP RESISTORS

| | | |
|---|---|---|
| R124 | QCF015020-3020 | CHIP RES. 3K OHM 1/10 W 5% |
| R125 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R126 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R129 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R130 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R131 | QCF015020-6820 | CHIP RES. 6.8K OHM 1/10 W 5% |
| R132 | QCF015020-6820 | CHIP RES. 6.8K OHM 1/10 W 5% |
| R133 | QCF015020-2220 | CHIP RES. 2.2K OHM 1/10 W 5% |
| R134 | QCF015020-2220 | CHIP RES. 2.2K OHM 1/10 W 5% |
| R137 | QCF015020-2720 | CHIP RES. 2.7K OHM 1/10 W 5% |
| R138 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R139 | QCF015020-4710 | CHIP RES. 470 OHM 1/10 W 5% |
| R151 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R152 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R154 | QCF015020-2730 | CHIP RES. 27K OHM 1/10 W 5% |
| R156 | QCF015020-3320 | CHIP RES. 3.3K OHM 1/10 W 5% |
| R157 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R158 | QCF015020-3320 | CHIP RES. 3.3K OHM 1/10 W 5% |
| R159 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R160 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R161 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R162 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R163 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R165 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R167 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R168 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R2001 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R2002 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R3 | QCF015020-4710 | CHIP RES. 470 OHM 1/10 W 5% |
| R3001 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R3002 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R3004 | QCF015020-3320 | CHIP RES. 3.3K OHM 1/10 W 5% |
| R3005 | QCF015020-3320 | CHIP RES. 3.3K OHM 1/10 W 5% |
| R3006 | QCF015020-3920 | CHIP RES. 3.9K OHM 1/10 W 5% |
| R3007 | QCF015020-3920 | CHIP RES. 3.9K OHM 1/10 W 5% |
| R3009 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R3010 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R3011 | QCF015020-3920 | CHIP RES. 3.9K OHM 1/10 W 5% |
| R3012 | QCF015020-3920 | CHIP RES. 3.9K OHM 1/10 W 5% |
| R3013 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R3014 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R3017 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R3018 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R3021 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R3022 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R3023 | QCF015020-1230 | CHIP RES. 12K OHM 1/10 W 5% |
| R3024 | QCF015020-1230 | CHIP RES. 12K OHM 1/10 W 5% |
| R3025 | QCF015020-5620 | CHIP RES. 5.6K OHM 1/10 W 5% |
| R3026 | QCF015020-5620 | CHIP RES. 5.6K OHM 1/10 W 5% |
| R3027 | QCF015020-5620 | CHIP RES. 5.6K OHM 1/10 W 5% |
| R3028 | QCF015020-5620 | CHIP RES. 5.6K OHM 1/10 W 5% |
| R303 | QCF015020-3330 | CHIP RES. 33K OHM 1/10 W 5% |
| R3031 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R3032 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R3033 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R3034 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R3041 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R3042 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R3043 | QCF015020-3320 | CHIP RES. 3.3K OHM 1/10 W 5% |
| R3044 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R3045 | QCF015020-3330 | CHIP RES. 33K OHM 1/10 W 5% |
| R3046 | QCF015020-1230 | CHIP RES. 12K OHM 1/10 W 5% |
| R3047 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R3048 | QCF015020-2220 | CHIP RES. 2.2K OHM 1/10 W 5% |
| R3049 | QCF015020-1230 | CHIP RES. 12K OHM 1/10 W 5% |
| R305 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |

### CHIP RESISTORS

| | | |
|---|---|---|
| R3050 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R3051 | QCF015020-1230 | CHIP RES. 12K OHM 1/10 W 5% |
| R3052 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R3053 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R306 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R307 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R311 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R312 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R313 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R314 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R319 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R320 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R321 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R322 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R323 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R324 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R325 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R326 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R327 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R328 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R329 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R330 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R332 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R333 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R334 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R335 | QCF015020-2730 | CHIP RES. 27K OHM 1/10 W 5% |
| R336 | QCF015020-2730 | CHIP RES. 27K OHM 1/10 W 5% |
| R337 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R338 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R339 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R340 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R341 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R342 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R343 | QCF015020-3640 | CHIP RES. 360K OHM 1/10 W 5% |
| R344 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R345 | QCF015020-3640 | CHIP RES. 360K OHM 1/10 W 5% |
| R346 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R347 | QCF015020-1830 | CHIP RES. 18K OHM 1/10 W 5% |
| R348 | QCF015020-1830 | CHIP RES. 18K OHM 1/10 W 5% |
| R349 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R350 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R351 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R352 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R353 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R354 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R355 | QCF015020-1830 | CHIP RES. 18K OHM 1/10 W 5% |
| R356 | QCF015020-1830 | CHIP RES. 18K OHM 1/10 W 5% |
| R357 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R358 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R359 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R360 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R361 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R362 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R363 | QCF015020-1830 | CHIP RES. 18K OHM 1/10 W 5% |
| R364 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R365 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R366 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R367 | QCF015020-1830 | CHIP RES. 18K OHM 1/10 W 5% |
| R368 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R369 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R370 | QCF015020-1020 | CHIP RES. 1K OHM 1/10 W 5% |
| R373 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R374 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R375 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R376 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R377 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |

CHIP RESISTORS

| | | |
|---|---|---|
| R378 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R379 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R380 | QCF015020-1530 | CHIP RES. 15K OHM 1/10 W 5% |
| R381 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R382 | QCF015020-1230 | CHIP RES. 12K OHM 1/10 W 5% |
| R383 | QCF015020-2730 | CHIP RES. 27K OHM 1/10 W 5% |
| R385 | QCF015020-5630 | CHIP RES. 56K OHM 1/10 W 5% |
| R390 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R391 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R392 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R393 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R394 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R395 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R396 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R397 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R398 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R399 | QCF015020-6830 | CHIP RES. 68K OHM 1/10 W 5% |
| R401 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R402 | QCF015020-1050 | CHIP RES. 1M OHM 1/10 W 5% |
| R403 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R404 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R405 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R406 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R407 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R408 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R411 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R412 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R413 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R503 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R504 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R505 | QCF045010-2200 | CHIP RES 22 OHM 1/4W 5% |
| R506 | QCF045010-2200 | CHIP RES 22 OHM 1/4W 5% |
| R507 | QCF045010-2200 | CHIP RES 22 OHM 1/4W 5% |
| R508 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R509 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R510 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R511 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R512 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R513 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R514 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R518 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R519 | QCF045010-2200 | CHIP RES 22 OHM 1/4W 5% |
| R520 | QCF045010-2200 | CHIP RES 22 OHM 1/4W 5% |
| R522 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R523 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R524 | QCF045010-6290 | CHIP RES. 6.2 OHM 1/4W 5% |
| R9002 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R9003 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R9004 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R9006 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R9007 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R9009 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R9031 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R9032 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R9034 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| R9035 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R9036 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R9038 | QCF015020-2230 | CHIP RES. 22K OHM 1/10 W 5% |
| VR102 | QCF015020-3920 | CHIP RES. 3.9K OHM 1/10 W 5% |

RESISTORS

| | | |
|---|---|---|
| JR1001 | QAF065000-3000 | RESISTOR 30 OHM 1/6 W 5% |
| JR1002 | QAF065000-3000 | RESISTOR 30 OHM 1/6 W 5% |
| R002 | QAF065000-1040 | RESISTOR 100K OHM 1/6 W 5% |
| R004 | QAF065000-1020 | RESISTOR 1K OHM 1/6 W 5% |
| R005 | QAF065000-3310 | RESISTOR 330 OHM 1/6 W 5% |

RESISTORS

| | | |
|---|---|---|
| R006 | QAF065000-1010 | RESISTOR 100 OHM 1/6 W 5% |
| R007 | QAF065000-1040 | RESISTOR 100K OHM 1/6 W 5% |
| R1029 | QAF065000-2710 | RESISTOR 270 OHM 1/6 W 5% |
| R1030 | QAF065000-2710 | RESISTOR 270 OHM 1/6 W 5% |
| R1081 | QAF065000-1000 | RESISTOR 10 OHM 1/6 W 5% |
| R1082 | QAF065000-1000 | RESISTOR 10 OHM 1/6 W 5% |
| R1083 | QAF065000-1000 | RESISTOR 10 OHM 1/6 W 5% |
| R1084 | QAF065000-1000 | RESISTOR 10 OHM 1/6 W 5% |
| R109 | QAF065000-1040 | RESISTOR 100K OHM 1/6 W 5% |
| R110 | QAF065000-4700 | RESISTOR 47 OHM 1/6 W 5% |
| R123 | QAF065000-4720 | RESISTOR 4.7K OHM 1/6 W 5% |
| R153 | QAF065000-1000 | RESISTOR 10 OHM 1/6 W 5% |
| R155 | QAF065000-1020 | RESISTOR 1K OHM 1/6 W 5% |
| R170 | QAF065000-1000 | RESISTOR 10 OHM 1/6 W 5% |
| R301 | QAF065000-4790 | RESISTOR 4.7 OHM 1/6 W 5% |
| R3019 | QAF045000-2210 | RESISTOR 220 OHM 1/4 W 5% |
| R302 | QAF065000-4790 | RESISTOR 4.7 OHM 1/6 W 5% |
| R3020 | QAF045000-2210 | RESISTOR 220 OHM 1/4 W 5% |
| R304 | QAF065000-4730 | RESISTOR 47K OHM 1/6 W 5% |
| R315 | QAF045000-2210 | RESISTOR 220 OHM 1/4 W 5% |
| R371 | QAF065000-1010 | RESISTOR 100 OHM 1/6 W 5% |
| R372 | QAF065000-1010 | RESISTOR 100 OHM 1/6 W 5% |
| R387 | QAF065000-1010 | RESISTOR 100 OHM 1/6 W 5% |
| R388 | QAF065000-1010 | RESISTOR 100 OHM 1/6 W 5% |
| R4013 | QAF065000-1010 | RESISTOR 100 OHM 1/6 W 5% |
| R4014 | QAF065000-1010 | RESISTOR 100 OHM 1/6 W 5% |
| R9001 | QAF025000-2290 | RESISTOR 2.2 OHM 1/2 W 5% |
| R9005 | QAF045000-5610 | RESISTOR 560 OHM 1/4 W 5% |
| R9008 | QAF045000-5610 | RESISTOR 560 OHM 1/4 W 5% |
| R9011 | QAF045000-1510 | RESISTOR 150 OHM 1/4 W 5% |
| R9012 | QAS045100-1090 | RESISTOR 1 OHM 1/4 W 5% |
| R9033 | QAF065000-5610 | RESISTOR 560 OHM 1/6 W 5% |
| R9037 | QAF045000-5610 | RESISTOR 560 OHM 1/4 W 5% |
| R9039 | QAS045100-1090 | RESISTOR 1 OHM 1/4 W 5% |
| RA1001 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1002 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1003 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1004 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1005 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1006 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1007 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1008 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1009 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1010 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1011 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1012 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1013 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1014 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1018 | QCP015081-4720 | RES ARRAY 4x4.7KOHM 1/10W |
| RA1020 | QCP015081-4720 | RES ARRAY 4x4.7KOHM 1/10W |
| RA1021 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1022 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |
| RA1023 | QCP015081-3300 | RES ARRAY 4x33 OHM 1/10W 5% |

DIODE

| | | |
|---|---|---|
| D001 | RAD114148-0010 | DIODE SW 1N4148 |
| D002 | RAD114148-0010 | DIODE SW 1N4148 |
| D003 | RAD114148-0010 | DIODE SW 1N4148 |
| D004 | RAD114148-0010 | DIODE SW 1N4148 |
| D1001 | RAD114148-0010 | DIODE SW 1N4148 |
| D1003 | RAD114148-0010 | DIODE SW 1N4148 |
| D101 | RAD114148-0010 | DIODE SW 1N4148 |
| D301 | RAD114148-0010 | DIODE SW 1N4148 |
| D302 | RAD114148-0010 | DIODE SW 1N4148 |
| D303 | RAD114148-0010 | DIODE SW 1N4148 |
| D304 | RAD114148-0010 | DIODE SW 1N4148 |

## DIODE

| | | |
|---|---|---|
| D305 | RAD114148-0010 | DIODE SW 1N4148 |
| D9002 | RAD114001-0010 | DIODE RECTIFIER 1N4001 |
| D9003 | RAD115392-0010 | DIODE 1N5392 1.5A 100V |
| VD001 | RHV100149-0001 | DIODE TUNG AM TOSHIBA |
| VD002 | RHV100149-0001 | DIODE TUNG AM TOSHIBA |
| ZD1001 | RAZ005003-0020 | DIODE ZENR 2.9-3.1V 0.5W |
| ZD1003 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD1004 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD1005 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD1006 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD1007 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD1008 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD1009 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD1010 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD1013 | RAZ005024-0020 | DIODE ZENR 23.6-24.7V 0.5W |
| ZD1014 | RAZ005003-0020 | DIODE ZENR 2.9-3.1V 0.5W |
| ZD3001 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD3002 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |
| ZD301 | RAZ005006-0030 | DIODE ZENR 6.0-6.3V 0.5W |
| ZD302 | RAZ005005-0030 | DIODE ZENR 5.0-5.2V 0.5W |
| ZD9001 | RAZ005011-0020 | DIODE ZENR 10.4-10.8V 0.5W |

## COILS

| | | |
|---|---|---|
| L1003 | SAN001600-1000 | CHOKE 10 uH 10% |
| L1004 | SAN001600-1000 | CHOKE 10 uH 10% |
| L1005 | SCN023500-2490 | CHIP INDUC 2.4 uH 5% SMD 0805 |
| L1006 | SCN023500-2490 | CHIP INDUC 2.4 uH 5% SMD 0805 |
| L1007 | SCN023500-2490 | CHIP INDUC 2.4 uH 5% SMD 0805 |
| L1008 | SCN023500-2490 | CHIP INDUC 2.4 uH 5% SMD 0805 |
| L1009 | SAN001600-1000 | CHOKE 10 uH 10% |
| L1010 | SAN001600-1000 | CHOKE 10 uH 10% |
| L1012 | SAN001600-1000 | CHOKE 10 uH 10% |
| L102 | SAN001600-1000 | CHOKE 10 uH 10% |
| L103 | SIL106003-3930 | COIL 39 mH 10% D6xH11xP5mm |
| L104 | SAN001600-1000 | CHOKE 10 uH 10% |
| L151 | SAN001600-1000 | CHOKE 10 uH 10% |
| L153 | SAN001600-1000 | CHOKE 10 uH 10% |
| L154 | SAN001600-1000 | CHOKE 10 uH 10% |
| L2032 | SIL106002-2000 | CHOKE COIL 20 uH 2A |
| L2034 | SIL106002-2000 | CHOKE COIL 20 uH 2A |
| L2036 | SIL106002-2000 | CHOKE COIL 20 uH 2A |
| L2037 | SIL106002-2000 | CHOKE COIL 20 uH 2A |
| L2038 | SIL106002-2000 | CHOKE COIL 20 uH 2A |
| L2045 | SIL102001-2000 | COMMON MODE CHOKE COIL 20uH D0.5mm 4PIN |
| L301 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| L302 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| L401 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |
| L402 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |
| L403 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |
| L404 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |
| L500 | SIN002002-3000 | INDUCTOR 30uH 15% 1KHZ 0.25V 2A |
| L501 | SIN002002-3000 | INDUCTOR 30uH 15% 1KHZ 0.25V 2A |
| L502 | SIN002002-3000 | INDUCTOR 30uH 15% 1KHZ 0.25V 2A |
| L503 | SIN002002-3000 | INDUCTOR 30uH 15% 1KHZ 0.25V 2A |
| L504 | SIL106002-2000 | CHOKE COIL 20 uH 2A |
| L507 | SIL102001-2000 | COMMON MODE CHOKE COIL 20uH D0.5mm 4PIN |
| L508 | SIL102001-2000 | COMMON MODE CHOKE COIL 20uH D0.5mm 4PIN |
| L509 | SIL102001-2000 | COMMON MODE CHOKE COIL 20uH D0.5mm 4PIN |

## COILS

| | | |
|---|---|---|
| L515 | SIL102001-2000 | COMMON MODE CHOKE COIL 20uH D0.5mm 4PIN |
| L9031 | SAN001600-1000 | CHOKE 10 uH 10% |
| L9032 | SAN001600-1000 | CHOKE 10 uH 10% |
| T001 | SIL013012-0010 | OSC FM SUMIDA S-8N |
| T002 | SIL013009-0011 | ANT OSC AM 4-6:10T 1-3:86T |
| T003 | SIL013010-0012 | OSC COIL 108uH (796 KHz) COIL |
| T101 | SIL016001-0010 | BIAS COIL 78 KHz |
| T102 | SIF010001-0040 | AM IFT 455KHz Q=130 |
| T103 | SIL016001-0020 | BIAS COIL 16 KHz |
| T104 | SIL016001-0020 | BIAS COIL 16 KHz |
| T105 | SIF020001-0050 | FM IFT 10.7MHz Q=60 MIN |

## CHIP FERITE BEAD

| | | |
|---|---|---|
| FB1001 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |
| FB1002 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |
| FB1004 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB9001 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB9002 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB9003 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| R4 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |
| R5 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |
| R6 | SCB008050-1010 | CHIP BEAD 100 OHM AT 100MHz |

## TRANSISTORS

| | | |
|---|---|---|
| Q001 | RAM200192-1001 | FET 2SK192A-Y/GR |
| Q1001 | RAN202001-0001 | XISTR NPN 2SC2001L NEC |
| Q1002 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q1003 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q101 | RAN201675-0001 | XISTR NPN 2SC1675L NEC |
| Q102 | RAN201675-0001 | XISTR NPN 2SC1675L NEC |
| Q103 | RAP200733-0001 | XISTR PNP 2SA733Q,P NEC |
| Q104 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q105 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q3001 | RAN202878-0001 | XISTR NPN 2SC2878-A (TE2,.M) |
| Q301 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q302 | RAN202878-0001 | XISTR NPN 2SC2878-A (TE2,.M) |
| Q303 | RAN202878-0001 | XISTR NPN 2SC2878-A (TE2,.M) |
| Q304 | RAN202878-0001 | XISTR NPN 2SC2878-A (TE2,.M) |
| Q305 | RAP200733-0001 | XISTR PNP 2SA733Q,P NEC |
| Q306 | RAP200733-0001 | XISTR PNP 2SA733Q,P NEC |
| Q9001 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q9002 | RHP200772-0001 | XISTR PNP 2SB772P/Q NEC |
| Q9003 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q9004 | RHP200772-0001 | XISTR PNP 2SB772P/Q NEC |
| Q9031 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q9032 | RAP200733-0001 | XISTR PNP 2SA733Q,P NEC |
| Q9033 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q9034 | RAP200733-0001 | XISTR PNP 2SA733Q,P NEC |

## INTERATED CIRCUITS

| | | |
|---|---|---|
| IC1 | RCI740374-0002 | IC 20 PIN 74HC374 |
| IC1001 | RCI290080-0001 | IC 40 PIN AM29F080B-90CE |
| IC1003 | RCI006028-0001 | IC 208 PIN ES6028 |
| IC1004 | RCI740004-0001 | IC 14 PIN TC74HC04AFN |
| IC1005 | RCI740374-0002 | IC 20 PIN 74HC374 |
| IC1006 | RCI740374-0002 | IC 20 PIN 74HC374 |
| IC1007 | RCI024002-0002 | IC 8 PIN AT24C02N-10SI-2.7 |
| IC1008 | RCI400160-0001 | IC 54 PIN 4MX16Y3VTW StarRam |
| IC1009 | RCI008746-0001 | IC 28 PIN WM8746 6CH D/A |
| IC101 | RCI001837-0001 | IC 30 PIN LA1837 SANYO |
| IC1010 | RCI740374-0002 | IC 20 PIN 74HC374 |
| IC1011 | RCI740244-0001 | IC 20 PIN SN74LVTH244APW TI |
| IC1012 | RCI740244-0001 | IC 20 PIN SN74LVTH244APW TI |
| IC1013 | RCI004112-0001 | IC 28 PIN AK4112BVF |

## INTERATED CIRCUITS

| | | |
|---|---|---|
| IC1015 | RCI008738-0001 | IC 14PIN WM8738ED SOIC WOLFSON 24-BIT |
| IC151 | RCI072720-0002 | IC 24 PIN LC72720NM |
| IC152 | RCI072131-0001 | IC 20 PIN LC72131M SANYO |
| IC2 | RCI740138-0005 | IC 16 PIN SN74LVC138ANSR SOP-NS TI |
| IC3001 | RCI004052-0001 | IC 16 PIN TC4052BFN CHIP |
| IC3002 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC3003 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC301 | RCI005228-0001 | IC 8PIN TP5228 SOP-8 TOPRO DRIVER W/MUTE |
| IC302 | RCI002259-0001 | IC 8PIN PT2259 SOP8 PTC (VOLUME CONTROL) |
| IC303 | RCI002259-0001 | IC 8PIN PT2259 SOP8 PTC (VOLUME CONTROL) |
| IC304 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC305 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC306 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC307 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC308 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC309 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC310 | RCI004558-0003 | IC 8PIN TEXAS RC4558D SOP8 |
| IC340 | RCI004053-0001 | IC 16 PIN TC4053BFN TOSHIBA |
| IC401 | RCI000304-0001 | IC 44 PIN STA304A |
| IC402 | RCI000304-0001 | IC 44 PIN STA304A |
| IC501 | RCI000505-0001 | IC 36 PIN STA505 50Wx2 |
| IC502 | RCI000505-0001 | IC 36 PIN STA505 50Wx2 |
| IC503 | RCI000505-0001 | IC 36 PIN STA505 50Wx2 |
| IC9001 | RHI007805-0401 | IC 3 PIN BA05T TO220FP ROHM |
| IC9003 | RCI916433-0001 | IC 3 PIN RT9164-33CLR |
| IC9004 | RHI007805-0401 | IC 3 PIN BA05T TO220FP ROHM |

## MISCELLANEOUS & OTHERS

| | | |
|---|---|---|
| CF101 | JFT005002-0020 | CER FILTER 10.7 MHZ |
| CF102 | JFT005002-0040 | CER FILTER 10.7 MHZ |
| CF103 | JFT005001-0030 | CER FILTER 450 KHZ |
| CN001 | CCN250000-0502 | CONNECTOR S2B-XH-A 2 PIN |
| CN1002 | CCN200000-0108 | CONNECTOR 8 PIN |
| CN1003 | CCN254020-0440 | CONNECTOR 20x2 PIN PLUG |
| CN1004 | CCN200000-0103 | CONNECTOR 3 PIN |
| CN1005 | CCN200000-0103 | CONNECTOR 3 PIN |
| CN202 | CCN200000-0111 | CONNECTOR 11 PIN |
| CN203 | CCN200000-0103 | CONNECTOR 3 PIN |
| CN3001 | CCN200000-0104 | CONNECTOR 4 PIN |
| CN9001 | CCN250000-0105 | CONNECTOR B5B-XH-A 5 PIN |
| CN904 | CCN250000-0108 | CONNECTOR B8B-XH-A 8 PIN |
| CN905 | CCN396020-0104 | CONNECTOR 4 PIN CL3962WVO |
| CN906 | CCN200000-0103 | CONNECTOR 3 PIN |
| CON1 | CCN200000-0107 | CONNECTOR 7 PIN |
| CON2 | CCN200000-0110 | CONNECTOR 10 PIN |
| EF001 | WTP000011-0001 | TUNER PACK KWANGSUN KST-F404VA2 |
| JK002 | CJA003002-2010 | RF JACK FEMALE TYPE |
| JK301 | CJT100001-0004 | TOSK JACK DLT1130 (TRANSMITTER) |
| JK302 | CJT200001-0008 | TOSK JACK DLR1130 (RECEIVER) |
| JK303 | CJR001301-0010 | RCA JACK 1P BLACK W/GEND |
| JK304 | CJR006101-0010 | RCA JACK 6P WHTx3/REDx3 |
| JK501 | CJS010101-0020 | SPK JACK 10P W/SPRING |
| RA1016 | QCP015081-1000 | CHIP ARRAY 10 OHMx4 1/10 W |
| RA1017 | QCP015081-1000 | CHIP ARRAY 10 OHMx4 1/10 W |
| RA1019 | QCP015081-1000 | CHIP ARRAY 10 OHMx4 1/10 W |
| XL101 | JQC022000-2760 | CRYSTAL 27.0000MHz HC-49US +/-20ppm |
| XL151 | JQC013102-4351 | CRYSTAL 4.332 MHZ HC-49/U 30PPM |

## MISCELLANEOUS & OTHERS

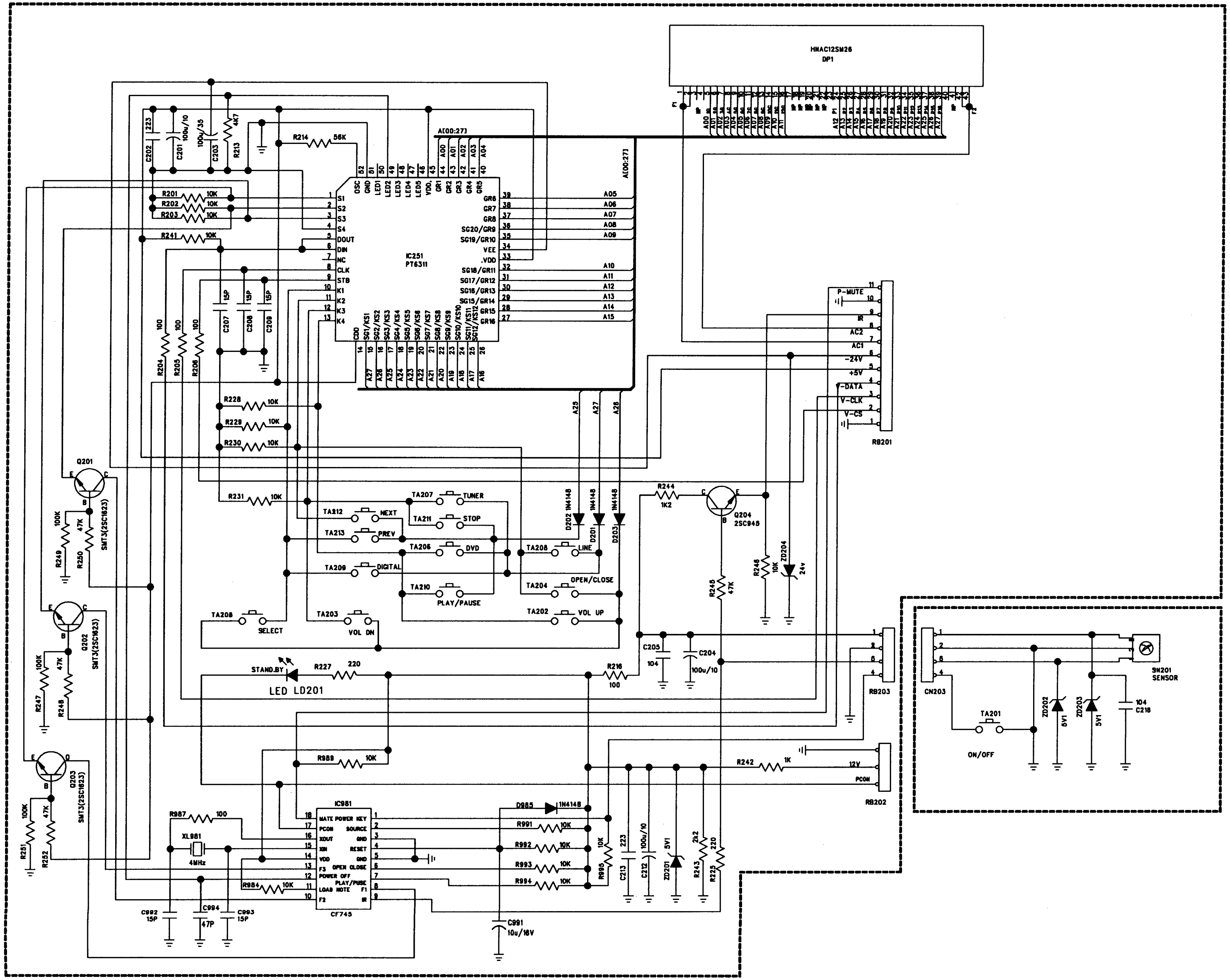
| | | |
|---|---|---|
| XL152 | JQC013102-4550 | CRYSTAL 4.5000 MHz HC-49/U 30PPM |
| XL501 | JQC122100-2461 | CRYSTAL DY 24.576MHz HC-49U/S +/-20PPM |

# CONTROL BOARD

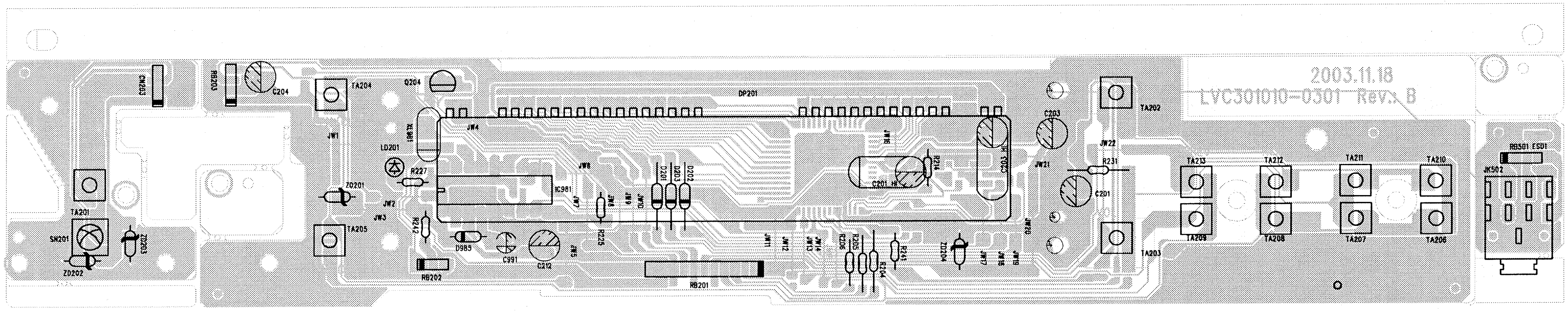
## TABLE OF CONTENTS

Circuit Diagram ---------------------------------------------------- 29
Component Layout ------------------------------------------------ 30
Part List ------------------------------------------------------ 31-32

# CIRCUIT DIAGRAM - CONTROL BOARD


HNAC12SM26
DP1
IC251
PT6311
A00:271
R214 56K
C202 223
C201 100u/10
C203 100u/35
R213 4K7
R201 10K
R202 10K
R203 10K
R241 10K
C207 15P
C208 15P
C209 15P
R204 100
R205 100
R206 100
R228 10K
R229 10K
R230 10K
R231 10K
Q201
Q202
Q203
SMT3(2SC1623)
R249 100K
R250 47K
R247 100K
R248 47K
R251 100K
R252 47K
TA207 TUNER
TA211 STOP
TA212 NEXT
TA213 PREV
TA206 DVD
TA209 DIGITAL
TA210 PLAY/PAUSE
TA205 SELECT
TA203 VOL DN
TA208 LINE
TA204 OPEN/CLOSE
TA202 VOL UP
D202 1N4148
D201 1N4148
D203 1N4148
R244 1K2
Q204 2SC945
R246 10K
ZD204 24V
R245 47K
P-MUTE
IR
AC2
AC1
-24V
+5V
V-DATA
V-CLK
V-CS
RB201
STAND.BY
LED LD201
R227 220
R216 100
C205 104
C204 100u/10
RB203
CN203
SN201 SENSOR
TA201 ON/OFF
ZD202 5V1
ZD203 5V1
C218 104
R989 10K
R242 1K
12V
PCON
RB202
IC981
CF745
R987 100
XL981 4MHz
R984 10K
C992 15P
C994 47P
C993 15P
D985 1N4148
R991 10K
R992 10K
R993 10K
R994 10K
C991 10u/16V
R995 10K
C213 223
C212 100u/10
ZD201 5V1
R243 2K2
R225 220

# CIRCUIT DIAGRAM - CONTROL BOARD


CN203
RB203
C204
TA204
Q204
DP201
JW1
X981
JW4
LD201
R227
ZD201
JW2
JW3
TA201
SN201
ZD203
ZD202
TA205
R242
D985
C991
C212
RB202
JW8
IC981
JW7
JW8
JW9
JW10
R225
JW5
D201
D203
D202
JW11
JW12
JW13
JW14
RB201
JW16
R206
R205
R204
R241
C201
R214
ZD204
JW17
JW18
JW19
C203
JW20
JW21
JW22
R231
C201
TA202
TA203
TA213
TA212
TA211
TA210
TA209
TA208
TA207
TA206
2003.11.18
LVC301010-0301 Rev.: B
RB501 ESD1
JK502

# PART LIST - CONTROL BOARD

### CHIP CAPACITORS

| | | |
|---|---|---|
| C210 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C211 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C216 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| ESDC201 | PYL410370-1020 | CHIP CAP 1000 pF 50 V 5% |
| C207 | PYL410370-1500 | CHIP CAP 15 pF 50V 5% |
| C208 | PYL410370-1500 | CHIP CAP 15 pF 50V 5% |
| C209 | PYL410370-1500 | CHIP CAP 15 pF 50V 5% |
| C992 | PYL410370-1500 | CHIP CAP 15 pF 50V 5% |
| C993 | PYL410370-1500 | CHIP CAP 15 pF 50V 5% |

### CAPACITORS

| | | |
|---|---|---|
| C991 | PVE839540-1000 | COND ELECT 10 uF 16V 20% |
| C201 | PVE939530-1010 | COND ELECT 100 uF 10V 20% |
| C204 | PVE839530-1010 | COND ELECT 100 uF 10V 20% |
| C212 | PVE839530-1010 | COND ELECT 100 uF 10V 20% |
| C203 | PRE039560-1010 | COND ELECT 100uF 35V 20% |

### CHIP RESISTORS

| | | |
|---|---|---|
| R261 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R262 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R263 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R264 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R244 | QCF015020-1220 | CHIP RES. 1.2K OHM 1/10 W 5% |
| R216 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R987 | QCF015020-1010 | CHIP RES. 100 OHM 1/10 W 5% |
| R247 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R249 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R251 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R201 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R202 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R203 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R228 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R229 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R230 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R246 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R984 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R989 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R991 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R992 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R993 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R994 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R995 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R243 | QCF015020-2220 | CHIP RES. 2.2K OHM 1/10 W 5% |
| R213 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R245 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R248 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R250 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |
| R252 | QCF015020-4730 | CHIP RES. 47K OHM 1/10 W 5% |

### RESISTORS

| | | |
|---|---|---|
| R204 | QAF065000-101 | RESISTOR 100 OHM 1/6 W 5% CF |
| R205 | QAF065000-101 | RESISTOR 100 OHM 1/6 W 5% CF |
| R206 | QAF065000-101 | RESISTOR 100 OHM 1/6 W 5% CF |
| R231 | QAF065000-103 | RESISTOR 10K OHM 1/6 W 5% CF |
| R242 | QAF065000-102 | RESISTOR 1K OHM 1/6 W 5% CF |
| R225 | QAF065000-221 | RESISTOR 220 OHM 1/6 W 5% CF |
| R227 | QAF065000-221 | RESISTOR 220 OHM 1/6 W 5% CF |

### RESISTORS

| | | |
|---|---|---|
| R214 | QAF065000-5630 | RESISTOR 56K OHM 1/6 W 5% |

### DIODE

| | | |
|---|---|---|
| D201 | RAD114148-0010 | DIODE SW 1N4148 |
| D202 | RAD114148-0010 | DIODE SW 1N4148 |
| D203 | RAD114148-0010 | DIODE SW 1N4148 |
| D985 | RAD114148-0010 | DIODE SW 1N4148 |
| ZD204 | RAZ005024-0020 | DIODE ZENR 23.6-24.7V 0.5W |
| ZD201 | RAZ005005-0030 | DIODE ZENR 5.0-5.2V 0.5W |
| ZD202 | RAZ005005-0030 | DIODE ZENR 5.0-5.2V 0.5W |
| ZD203 | RAZ005005-0030 | DIODE ZENR 5.0-5.2V 0.5W |

### TRANSISTORS

| | | |
|---|---|---|
| Q204 | RAN200945-0001 | XISTR NPN 2SC945P |
| Q201 | RCN201623-0001 | XISTR NPN HFE:200-400 L6 |
| Q202 | RCN201623-0001 | XISTR NPN HFE:200-400 L6 |
| Q203 | RCN201623-0001 | XISTR NPN HFE:200-400 L6 |

### WIRE JUMPER

| | | |
|---|---|---|
| JW1 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW10 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW11 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW12 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW13 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW14 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW15 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW16 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW17 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW18 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW19 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW2 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW20 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW21 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW22 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW23 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW3 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW4 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW5 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW6 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW7 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW8 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW9 | XJP220000-0001 | WIRE BARE 22 GA TINNED |

### MISCELLANEOUS & OTHERS

| | | |
|---|---|---|
| DP201 | KLV000016-0010 | VFD VA84x9PA100.2x20.5mm |
| IC251 | RCI006311-0001 | IC 52 PIN PT6311(PTC) |
| IC981 | RHI007450-0009 | IC 18 PIN CF745 W/SOFTWARE VERSION""I"" |
| JK501 | CJM035002-1030 | PHONE JACK D3.5 9 PIN NICKEL |
| LD201 | KED300003-0020 | LED DIA3.0mm ORANGE ROUND |
| RB201 | VFLB1124B-2000 | CON/WIRE 11P L=200mm UL2468#26 BLK |
| RB202 | VFL31124B-2500 | CON/WIRE 3P 250mm UL2468#26 BLK |
| RB501 | VFL41124B-1000 | CON/WIRE 4P 100mm BLK |
| SN201 | RHO693804-2001 | IRT SENSOR RPM6938-V4 |
| TA201 | MAW106001-0010 | AI TACT SW H=5mm 160GF PLASTIC COVER |
| TA202 | MAW106001-0010 | AI TACT SW H=5mm 160GF PLASTIC COVER |
| TA203 | MAW106001-0010 | AI TACT SW H=5mm 160GF PLASTIC COVER |
| TA204 | MAW106001-0010 | AI TACT SW H=5mm 160GF PLASTIC COVER |
| TA205 | MAW106001-0010 | AI TACT SW H=5mm 160GF PLASTIC COVER |

MISCELLANEOUS & OTHERS

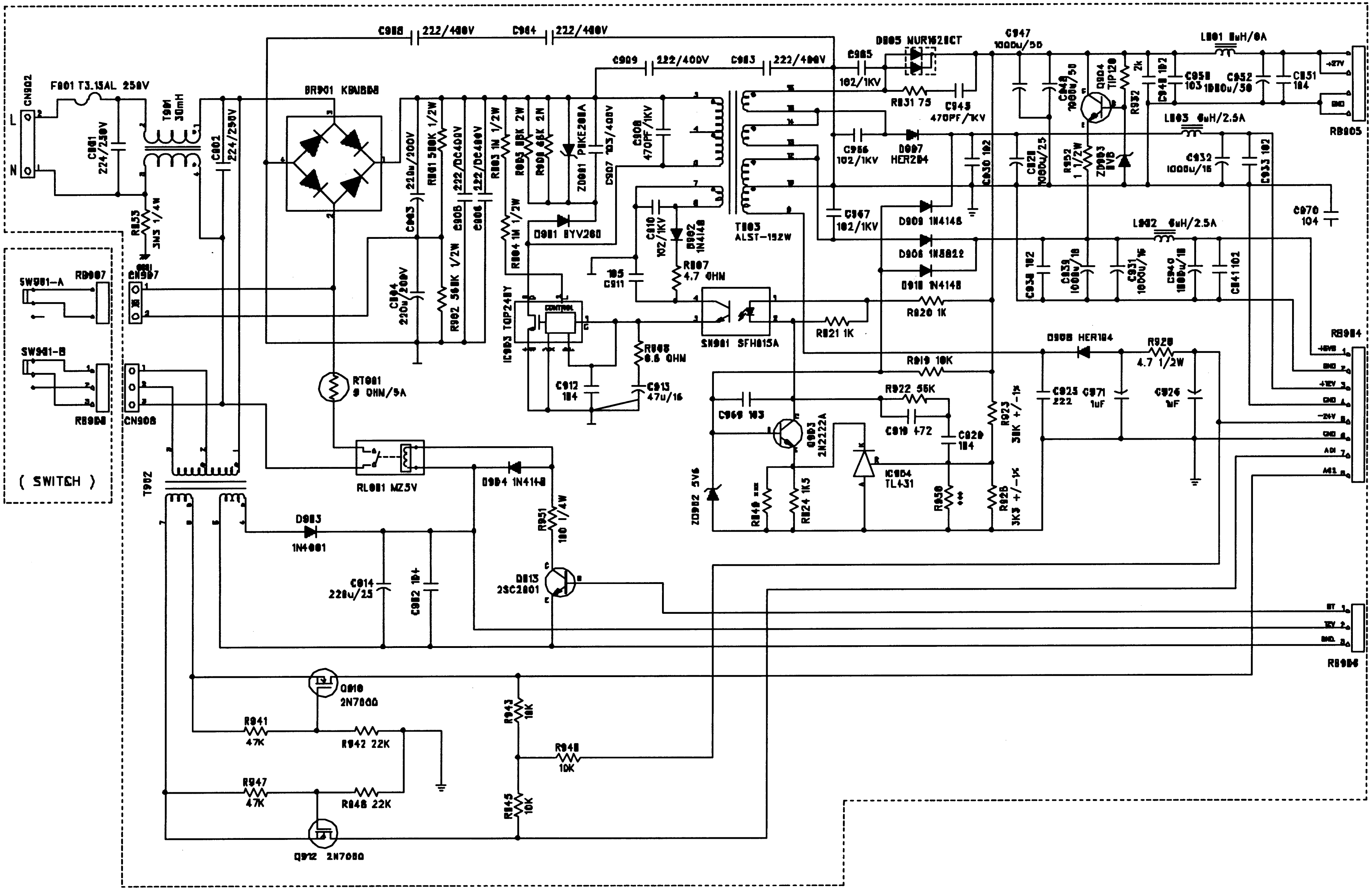
| | | |
|---|---|---|
| TA206 | MAW106001-0010 | AI TACT SW H=5mm 160GF<br>PLASTIC COVER |
| TA207 | MAW106001-0010 | AI TACT SW H=5mm 160GF<br>PLASTIC COVER |
| TA208 | MAW106001-0010 | AI TACT SW H=5mm 160GF<br>PLASTIC COVER |
| TA209 | MAW106001-0010 | AI TACT SW H=5mm 160GF<br>PLASTIC COVER |
| TA210 | MAW106001-0010 | AI TACT SW H=5mm 160GF<br>PLASTIC COVER |
| TA211 | MAW106001-0010 | AI TACT SW H=5mm 160GF<br>PLASTIC COVER |
| TA212 | MAW106001-0010 | AI TACT SW H=5mm 160GF<br>PLASTIC COVER |
| TA213 | MAW106001-0010 | AI TACT SW H=5mm 160GF<br>PLASTIC COVER |
| XL981 | JQC023100-4050 | CRYSTAL 4 MHZ HC-49US |

# POWER BOARD

TABLE OF CONTENTS

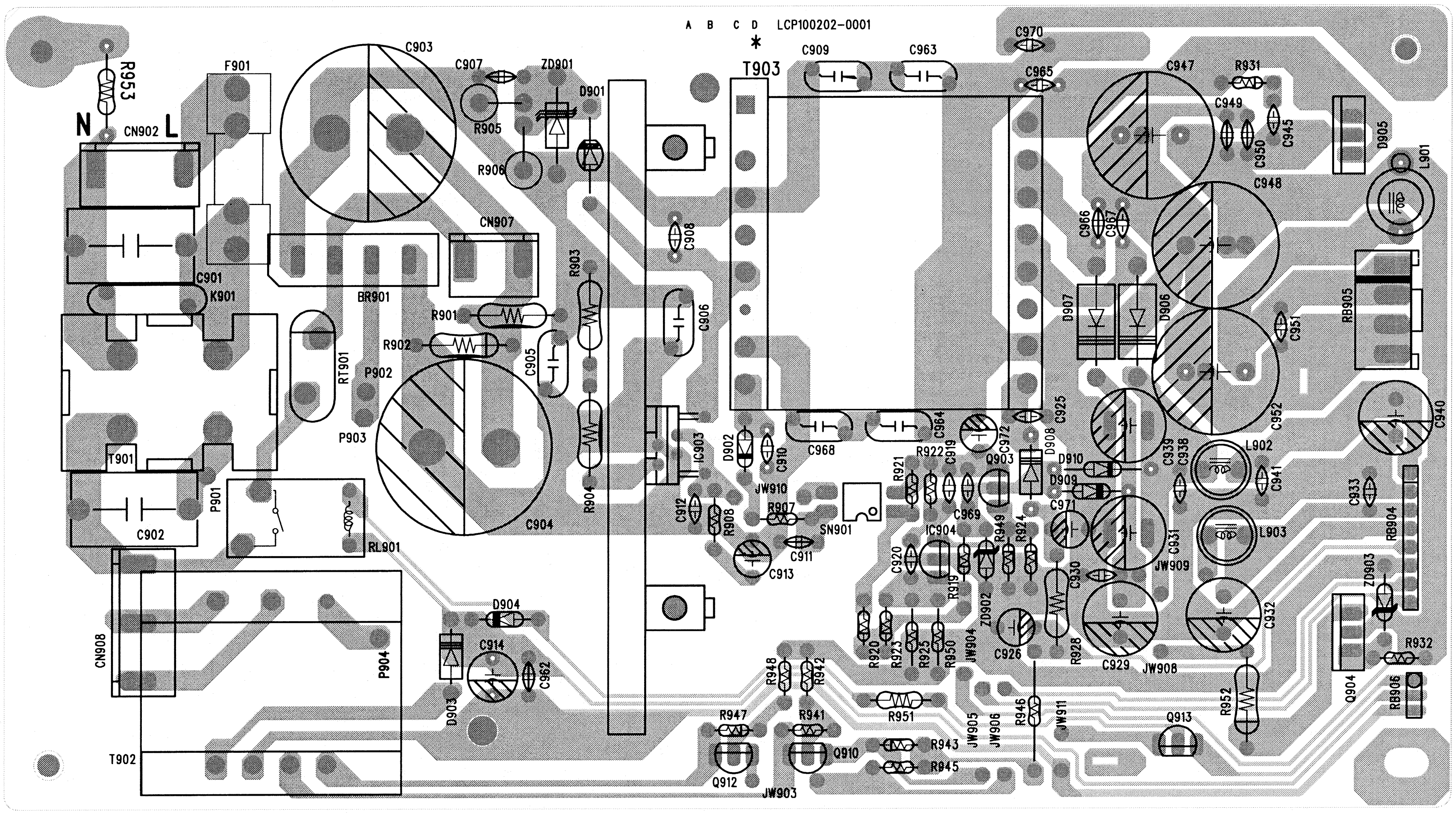
Circuit Diagram ---------------------------------------------------- 34
Component Layout ---------------------------------------------- 35
Part List ------------------------------------------------------------ 36-37

# CIRCUIT DIAGRAM - POWER BOARD



CN902
L
N
F901 T3.15AL 250V
C901 224/250V
T901 30mH
C902 224/250V
R953 3M3 1/4W
BR901 KBU808
C903 220u/200V
C904 220u/200V
R901 560K 1/2W
R902 560K 1/2W
C905 222/DC400V
C906 222/DC400V
R903 1M 1/2W
R904 1M 1/2W
R905 68K 2W
R906 68K 2W
ZD901 P6KE200A
C907 103/400V
D901 BYV26D
C908 470PF/1KV
C910 102/1KV
D902 1N4148
R907 4.7 OHM
C911 105
IC903 TOP249Y
CONTROL
R908 6.8 OHM
C912 104
C913 47u/16
T903 ALST-152W
SN901 SFH615A
R921 1K
C988 222/400V
C904 222/400V
C909 222/400V
C903 222/400V
C985 102/1KV
D905 MUR1620CT
R931 75
C945 470PF/1KV
C947 1000u/50
C948 1000u/50
Q904 TIP120
R932 2k
C949 102
C950 103
C952 1000u/50
C951 104
L901 8uH/8A
+37V
GND
RB905
C956 102/1KV
D907 HER204
C930 102
C928 1000u/25
R952 1 1/2W
ZD903 8V2
L903 8uH/2.5A
C932 1000u/16
C933 102
C967 102/1KV
D909 1N4148
D906 1N5822
D910 1N4148
L902 8uH/2.5A
C970 104
C938 102
C939 1000u/16
C931 1000u/16
C940 1000u/16
C941 102
R920 1K
R919 10K
D908 HER104
R928 4.7 1/2W
C969 103
R922 56K
C919 472
C920 104
Q903 2N2222A
IC904 TL431
R923 39K +/-1%
R926 3K3 +/-1%
R950
R949
R924 1K5
ZD902 5V6
C925 222
C971 1uF
C926 1uF
RB904
+5VS
GND
+12V
GND
-24V
GND
ADI
ACI
SW901-A
RB907
CN907
SW901-B
RB908
CN908
( SWITCH )
RT901 8 OHM/5A
RL901 MZ5V
D904 1N4148
R951 100 1/4W
T902
D903 1N4001
C914 220u/25
C982 104
Q913 2SC2001
ST
12V
GND
RB906
Q910 2N7000
R941 47K
R942 22K
R943 10K
R948 10K
R945 10K
R947 47K
R946 22K
Q912 2N7000

# CIRCUIT DIAGRAM - POWER BOARD


A B C D LCP100202-0001
T903
C970
C909
C963
C965
C947
R931
C949
C945
C950
D905
L901
C948
R953
N
CN902
L
F901
C903
C907
ZD901
D901
R905
R906
CN907
C908
C966
C967
C901
K901
BR901
R903
R901
R902
C905
C906
D907
D906
RB905
C951
RT901
P902
P903
C904
R904
IC903
D902
C910
C968
C964
C972
Q903
D908
C925
C939
C938
L902
C952
C940
T901
R922
C919
R921
D910
D909
C941
C933
JW910
R907
SN901
C969
C971
P901
C902
RL901
C912
R908
C911
C913
IC904
R949
R924
C931
L903
RB904
C920
R919
C930
JW909
ZD903
D904
ZD902
C926
R928
C929
JW908
C932
CN908
P904
C914
C962
D903
R920
R923
R925
R950
JW904
R948
R942
R951
R946
JW911
R952
Q904
R932
RB906
R947
R941
R943
R945
JW905
JW906
Q913
Q912
Q910
JW903
T902

# PART LIST - POWER BOARD

CAPACITORS

| | | |
|---|---|---|
| C969 | PRD235470-1030 | COND DISC 0.01 uF 50V 10% |
| C950 | PRD235470-1030 | COND DISC 0.01 uF 50V 10% |
| C970 | PRD249670-1040 | COND DISC 0.1 uF 50V +80-20% |
| C912 | PRD249670-1040 | COND DISC 0.1 uF 50V +80-20% |
| C951 | PRD249670-1040 | COND DISC 0.1 uF 50V +80-20% |
| C962 | PRD249670-1040 | COND DISC 0.1 uF 50V +80-20% |
| C920 | PRD235470-1040 | COND DISC 0.1 uF 50V 10% |
| C930 | PRD235470-1020 | COND DISC 1000 pF 50V 10% |
| C933 | PRD235470-1020 | COND DISC 1000 pF 50V 10% |
| C938 | PRD235470-1020 | COND DISC 1000 pF 50V 10% |
| C941 | PRD235470-1020 | COND DISC 1000 pF 50V 10% |
| C949 | PRD235470-1020 | COND DISC 1000 pF 50V 10% |
| C945 | PRD2354Q0-4710 | COND DISC 470 pF 1KV 10% |
| C908 | PRD5564Q0-4710 | COND DISC 470 pF 1KV 10% |
| C919 | PRD235470-4720 | COND DISC 4700 pF 50V 10% |
| C965 | PRD2355Q0-1020 | COND DISC 0.001uF 1KV 20% (FORMING& |
| C910 | PRD2355Q0-1020 | COND DISC 0.001uF 1KV 20% (FORMING& |
| C925 | PRD2355Q0-1020 | COND DISC 0.001uF 1KV 20% (FORMING& |
| C966 | PRD2355Q0-1020 | COND DISC 0.001uF 1KV 20% (FORMING& |
| C967 | PRD2355Q0-1020 | COND DISC 0.001uF 1KV 20% (FORMING& |
| C907 | PRD2355Q0-1030 | COND DISC 0.01uF1KV 20% (FORMING&TAPPING |
| C972 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C932 | PME039540-1020 | COND ELECT 1000 uF 16V 20% |
| C939 | PME039540-1020 | COND ELECT 1000 uF 16V 20% |
| C940 | PME039540-1020 | COND ELECT 1000 uF 16V 20% |
| C931 | PVE039540-1020 | COND ELECT 1000 uF 16V 20% |
| C929 | PVE039550-1020 | COND ELECT 1000 uF 25V 20% |
| C947 | PVE039570-1020 | COND ELECT 1000 uF 50V 20% |
| C948 | PVE039570-1020 | COND ELECT 1000 uF 50V 20% |
| C952 | PVE039570-1020 | COND ELECT 1000 uF 50V 20% |
| C971 | PRE039570-1090 | COND ELECT 1uF 50V 20% |
| C926 | PRE039570-1090 | COND ELECT 1uF 50V 20% |
| C903 | PJE0995E0-2210 | COND ELECT 220 uF 200V 20% |
| C904 | PJE0995E0-2210 | COND ELECT 220 uF 200V 20% |
| C914 | PRE039550-2210 | COND ELECT 220uF 25V 20% |
| C913 | PRE039550-4700 | COND ELECT 47uF 25V 20% |
| C911 | PRL048570-1050 | COND MULTI 1 uF 50V 20% |
| C915 | PRL048570-1050 | COND MULTI 1 uF 50V 20% |
| C968 | PVY1705F0-2220 | COND SAFETY 0.0022UF 250V 20% Y1 Y5U |
| C905 | PVY1705F0-2220 | COND SAFETY 0.0022UF 250V 20% Y1 Y5U |
| C906 | PVY1705F0-2220 | COND SAFETY 0.0022UF 250V 20% Y1 Y5U |
| C909 | PVY1705F0-2220 | COND SAFETY 0.0022UF 250V 20% Y1 Y5U |
| C963 | PVY1705F0-2220 | COND SAFETY 0.0022UF 250V 20% Y1 Y5U |
| C964 | PVY1705F0-2220 | COND SAFETY 0.0022UF 250V 20% Y1 Y5U |
| C901 | PVX2705G0-2240 | COND SAFETY 0.22uF 275V X2P 20% |
| C902 | PVX2705G0-2240 | COND SAFETY 0.22uF 275V X2P 20% |
| R928 | QAS025100-4790 | RESISTOR 4.7 OHM 1/2W 5% |
| R952 | QAS025100-1090 | RESISTOR 1 OHM 1/2 W 5% |
| R951 | QAF045000-1010 | RESISTOR 100 OHM 1/4 W 5% |
| R919 | QAF065000-1030 | RESISTOR 10K OHM 1/6 W 5% |
| R943 | QAF065000-1030 | RESISTOR 10K OHM 1/6 W 5% |
| R945 | QAF065000-1030 | RESISTOR 10K OHM 1/6 W 5% |

RESISTORS

| | | |
|---|---|---|
| R946 | QAF065000-1030 | RESISTOR 10K OHM 1/6 W 5% |
| R920 | QAF065000-1020 | RESISTOR 1K OHM 1/6 W 5% |
| R921 | QAF065000-1020 | RESISTOR 1K OHM 1/6 W 5% |
| R903 | QAF025000-1050 | RESISTOR 1M OHM 1/2 W 5% |
| R904 | QAF025000-1050 | RESISTOR 1M OHM 1/2 W 5% |
| R924 | QAF065000-2220 | RESISTOR 2.2K OHM 1/6 W 5% |
| R925 | QAM061000-2701 | RESISTOR 2.7K OHM 1/6 W 1% |
| R942 | QAF065000-2230 | RESISTOR 22K OHM 1/6 W 5% |
| R948 | QAF065000-2230 | RESISTOR 22K OHM 1/6 W 5% |
| R932 | QAF065000-2020 | RESISTOR 2K OHM 1/6 W 5% |
| R923 | QAM061000-3002 | RESISTOR 30K OHM 1/6 W 1% |
| R907 | QAF045000-4790 | RESISTOR 4.7 OHM 1/4 W 5% |
| R941 | QAF065000-4730 | RESISTOR 47K OHM 1/6 W 5% |
| R947 | QAF065000-4730 | RESISTOR 47K OHM 1/6 W 5% |
| R901 | QAF025000-5640 | RESISTOR 560K OHM 1/2 W 5% |
| R902 | QAF025000-5640 | RESISTOR 560K OHM 1/2 W 5% |
| R922 | QAF065000-5630 | RESISTOR 56K OHM 1/6 W 5% |
| R908 | QAF065000-6890 | RESISTOR 6.8 OHM 1/6 W 5% |
| R905 | QGN205000-6830 | RESISTOR 68K OHM 2 W 5% |
| R906 | QGN205000-6830 | RESISTOR 68K OHM 2 W 5% |
| R931 | QAF065000-7500 | RESISTOR 75 OHM 1/6 W 5% |

DIODE

| | | |
|---|---|---|
| BR901 | RHD208080-0010 | BRIDGE KBU808 8A 800V UL |
| D905 | RHD208020-0010 | BRIDGE MUR1620CT 8A 200V |
| D908 | RAD100104-0010 | DIODE HER104 1A 300V 50nS |
| D907 | RAD100204-0010 | DIODE HER204 2A 300V 50nS |
| ZD901 | RAD160200-0010 | DIODE P6KE200A |
| D901 | RAD100026-0010 | DIODE BYV26D PHILIPS |
| D906 | RAD115822-0010 | DIODE RECT 1N5822 3A 45V |
| D903 | RAD114001-0010 | DIODE RECTIFIER 1N4001 |
| D902 | RAD114148-0010 | DIODE SW 1N4148 |
| D904 | RAD114148-0010 | DIODE SW 1N4148 |
| D909 | RAD114148-0010 | DIODE SW 1N4148 |
| D910 | RAD114148-0010 | DIODE SW 1N4148 |
| ZD902 | RAZ005006-0020 | DIODE ZENR 5.6-5.9V 0.5W |
| ZD903 | RAZ005007-0020 | DIODE ZENR 6.9-7.2V 0.5W |

WIRE JUMPER

| | | |
|---|---|---|
| JW903 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW904 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW905 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW906 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW907 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW908 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW909 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW910 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JW911 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| ZD1 | XJP220000-0001 | WIRE BARE 22 GA TINNED |

MISCELLANEOUS & OTHERS

| | | |
|---|---|---|
| CN902 | CCN396021-0104 | CONNECTOR 4 PIN P=3.96mm |
| F901 | KSA020315-0120 | FUSE 3.15A 250V SLOW(WALTER TSD) |
| IC903 | RHI000249-0001 | IC 6 PIN TOP249 250W |
| IC904 | RHI004310-0001 | IC 3 PIN TL431 |
| L901 | SIL106001-6090 | INDUCTOR 6uH 10.5Ts 6A |
| L902 | SIL106002-6090 | INDUCTOR 6uH 13.5Ts 2UEW |
| L903 | SIL106002-6090 | INDUCTOR 6uH 13.5Ts 2UEW |
| Q903 | RAN202222-0001 | XISTR NPN PN2222A FAIRCHILD |
| Q904 | RHN000122-0001 | XISTR NPN TIP122 TO-220 SGS- |
| Q910 | RAM207000-1001 | MOS FET 2N7000 60V 200mA |
| Q912 | RAM207000-1001 | MOS FET 2N7000 60V 200mA |
| Q913 | RAN202001-0001 | XISTR NPN 2SC2001L NEC |
| RB904 | VFL81131B-1400 | CON/WIRE 8P 140mm BLK |
| RB906 | VFL31124B-2200 | CON/WIRE 3P 220mm BLK |

## MISCELLANEOUS & OTHERS

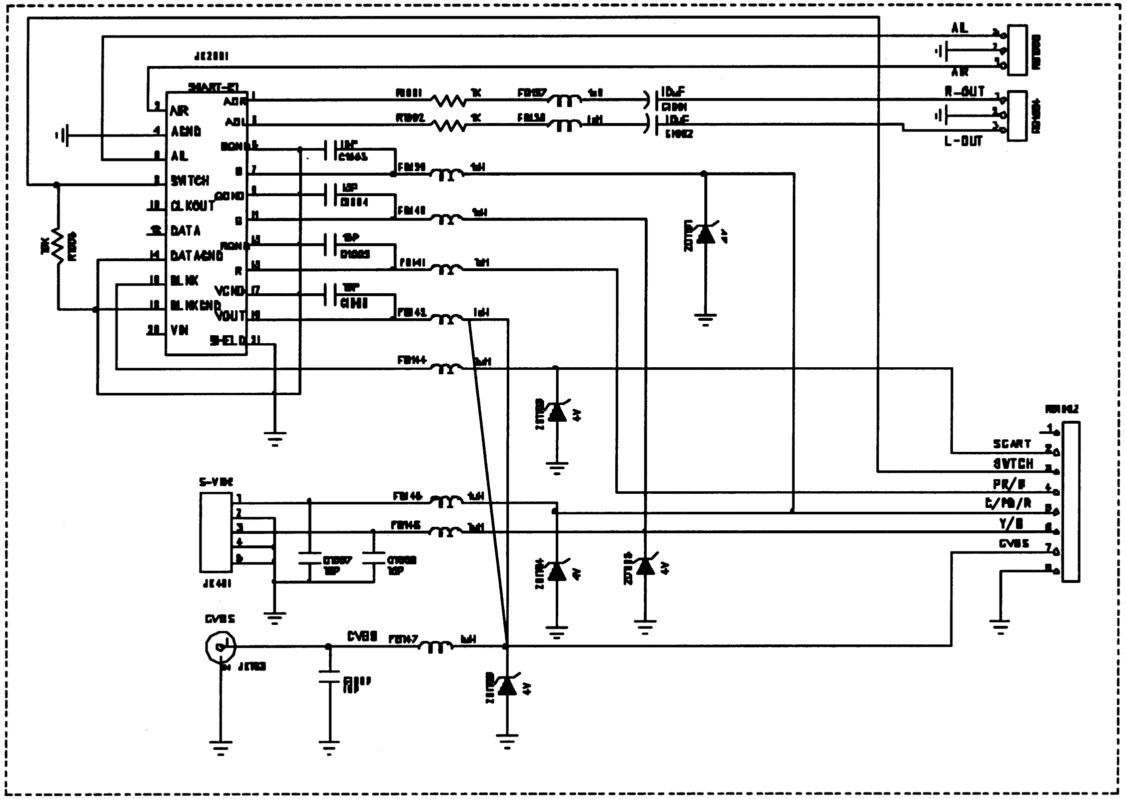
| | | |
|---|---|---|
| RL901 | MRL012004-0012 | RELAY GJ-SH-112DM 絕緣耐壓 =4KV 緣點 |
| RT901 | RNT005130-5090 | NTC 5 OHM 5A DIA=13 mm |
| SN901 | RHO615003-3001 | OPT SENSOR SFH615A-3 |
| T901 | JFT006008-0020 | AC FILTER 1.7A L1:86TS L2:86TS |
| T902 | TTB123011-0020 | PWR TRANS 230V EI-35 |
| T903 | TSC100001-0010 | PWR TRANS EE-42 50W |

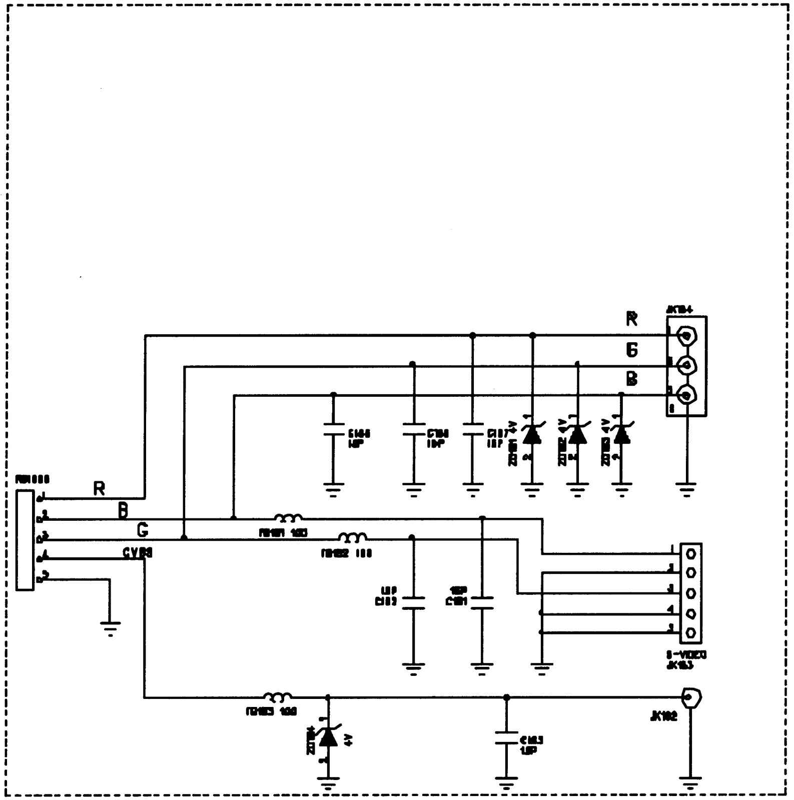
# SCART BOARD

## TABLE OF CONTENTS

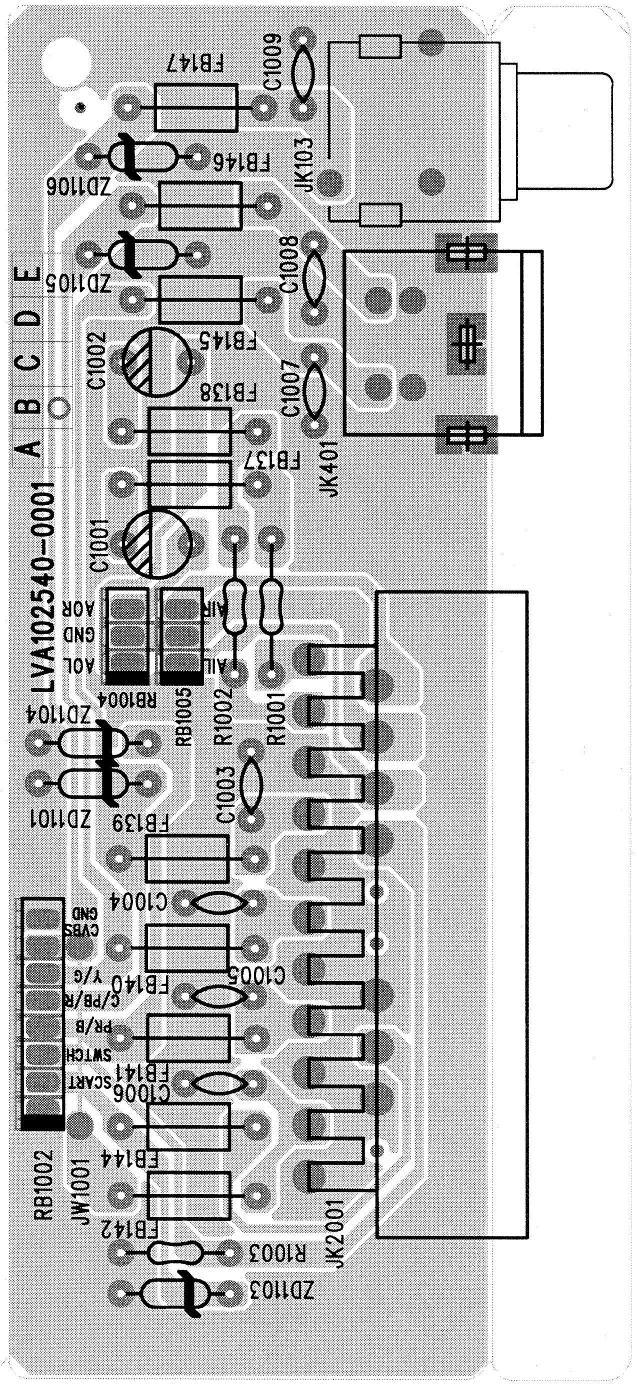
Circuit Diagram ---------------------------------------------------- 39
Component Layout -------------------------------------------------- 40
Part List ------------------------------------------------------------ 40

# CIRCUIT DIAGRAM - SCART BOARD


SCART-E1
AIR
AGND
AIL
SWITCH
CLKOUT
DATA
DATAGND
BLNK
BLNKGND
VIN
AOR
AOL
B
G
R
VGND
VOUT
SHIELD
1K
1uH
10uF
10P
4V
AL
AR
R-OUT
L-OUT
SCART
SWTCH
PR/P
C/PB/R
Y/B
CVBS
S-VIDEO
CVBS


R
G
B
R
B
G
CVBS
4V
100
10P
S-VIDEO
JK103
JK102

## CIRCUIT DIAGRAM - SCART BOARD


LVA102540-0001
A
B
C
D
E
FB147
C1009
FB146
ZD1106
JK103
C1008
ZD1105
FB145
C1002
FB138
C1007
FB137
JK401
C1001
AOR
GND
AOL
AIR
AIL
RB1004
RB1005
R1002
R1001
ZD1104
ZD1101
FB139
C1003
C1004
GND
CVBS
Y/G
FB140
C1005
C/PB/R
PR/B
SWTCH
FB141
SCART
C1006
RB1002
JW1001
FB144
FB142
R1003
JK2001
ZD1103

## PART LIST - SCART BOARD

CAPACITORS

| | | |
|---|---|---|
| C1001 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1002 | PRE039570-1000 | COND ELECT 10 uF 50V 20% |
| C1003 | PVD113370-1500 | COND DISC 15 pF 50V 5% |
| C1004 | PVD113370-1500 | COND DISC 15 pF 50V 5% |
| C1005 | PVD113370-1500 | COND DISC 15 pF 50V 5% |
| C1006 | PVD113370-1500 | COND DISC 15 pF 50V 5% |
| C1007 | PVD113370-1500 | COND DISC 15 pF 50V 5% |
| C1008 | PVD113370-1500 | COND DISC 15 pF 50V 5% |
| C1009 | PVD113370-1500 | COND DISC 15 pF 50V 5% |

RESISTORS

| | | |
|---|---|---|
| R1001 | QAF065000-1020 | RESISTOR 1K OHM 1/6 W 5% |
| R1002 | QAF065000-1020 | RESISTOR 1K OHM 1/6 W 5% |

DIODE

| | | |
|---|---|---|
| ZD1101 | RAZ005004-0020 | DIODE ZENR 3.8-4.0V 0.5w |
| ZD1103 | RAZ005004-0020 | DIODE ZENR 3.8-4.0V 0.5w |
| ZD1104 | RAZ005004-0020 | DIODE ZENR 3.8-4.0V 0.5w |
| ZD1105 | RAZ005004-0020 | DIODE ZENR 3.8-4.0V 0.5w |
| ZD1106 | RAZ005004-0020 | DIODE ZENR 3.8-4.0V 0.5w |

CHIP FERITE BEAD

| | | |
|---|---|---|
| FB137 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB138 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB139 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB140 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB141 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB142 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB144 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB145 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB146 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |
| FB147 | SFB001001-0030 | BEAD FERIT DIA3.5x6mm |

MISCELLANEOUS & OTHERS

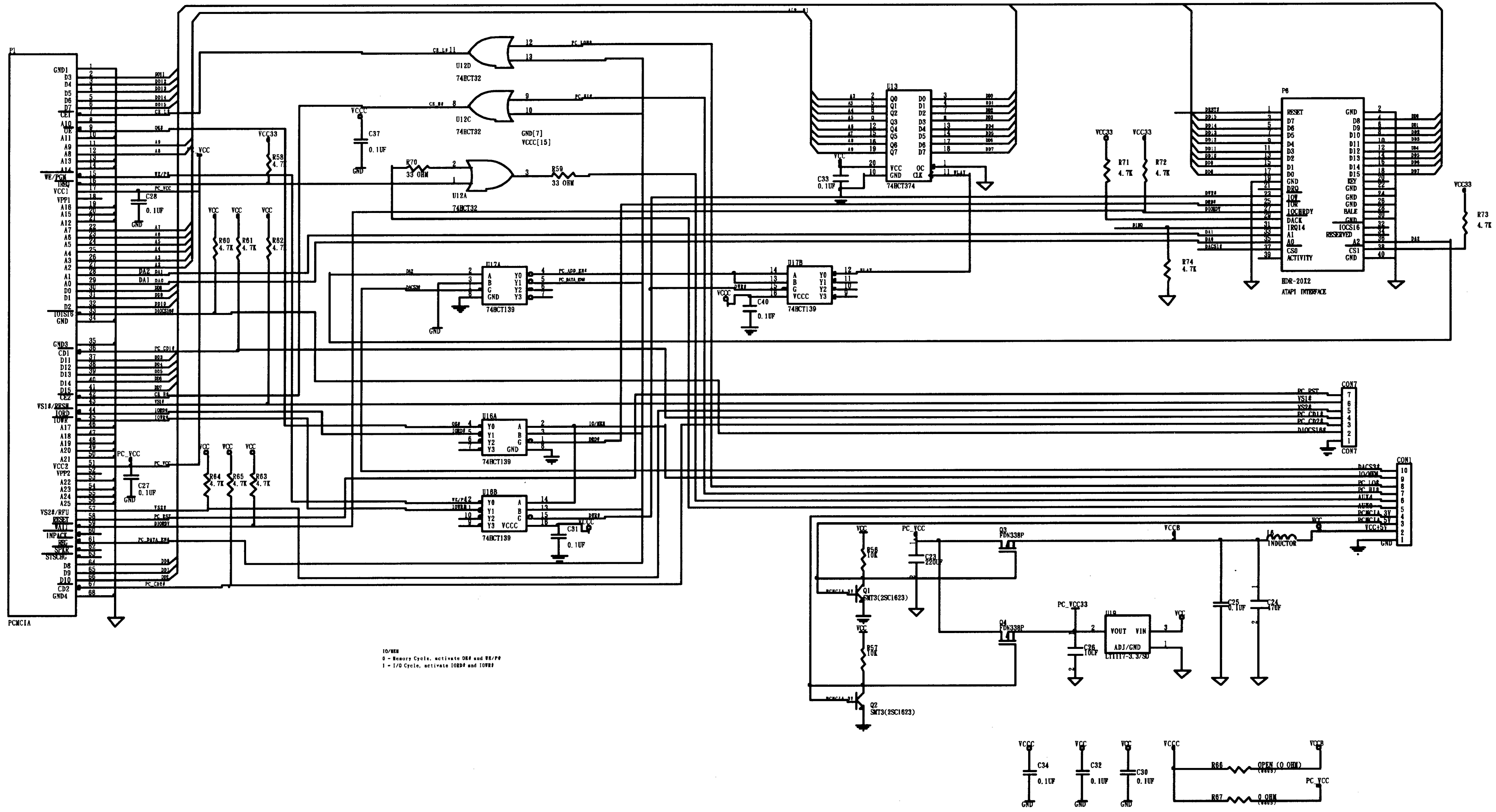
| | | |
|---|---|---|
| JW1001 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| R1003 | XJP220000-0001 | WIRE BARE 22 GA TINNED |
| JK103 | CJR001301-0020 | RCA JACK 1P YELLOW W/GND |
| JK2001 | CSS021001-1020 | SCART SOCK 21PIN |
| JK4001 | CJD004201-1020 | DIN JACK 4 PIN |
| RB1002 | VWA200049-0004 | CON/WIRE AY 3P/5P 350mm 2468/2854 |
| RB1004 | VSW323452-0600 | COND SHIELD CABLE 3P 60mm 2547#26 GRY |
| RB1005 | VSW325452-0100 | CON/CABLE 3P 100mm 2547#30 GRY |

# PCMCIA BOARD

## TABLE OF CONTENTS

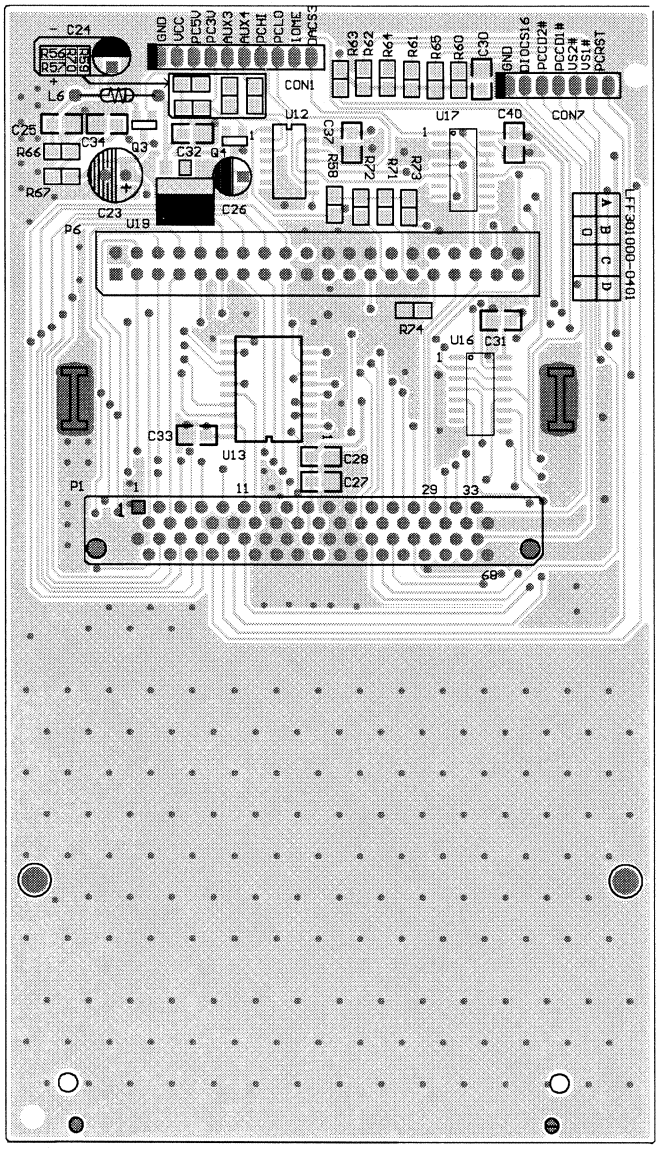
Circuit Diagram ---------- 42
Component Layout ---------- 43
Part List ---------- 43

# CIRCUIT DIAGRAM - PCMCIA BOARD


P1
PCMCIA
GND1
D3
D4
D5
D6
D7
CE1
A10
OE
A11
A9
A8
A13
A14
WE/PGM
IREQ
VCC1
VPP1
A16
A15
A12
A7
A6
A5
A4
A3
A2
A1
A0
D0
D1
D2
IOIS16
GND
GND3
CD1
D11
D12
D13
D14
D15
CE2
VS1#/RFSH
IORD
IOWR
A17
A18
A19
A20
A21
VCC2
VPP2
A22
A23
A24
A25
VS2#/RFU
RESET
WAIT
INPACK
REG
SPKR
STSCHG
D8
D9
D10
CD2
GND4
U12D
74HCT32
U12C
74HCT32
U12A
74HCT32
GND[7]
VCCC[15]
VCCC
C37
0.1UF
VCC33
R58
4.7K
R70
33 OHM
R59
33 OHM
C28
0.1UF
VCC
R60
4.7K
R61
4.7K
R62
4.7K
U17A
74HCT139
U17B
74HCT139
C40
0.1UF
U13
74HCT374
C33
0.1UF
U16A
74HCT139
U16B
74HCT139
C31
0.1UF
PC_VCC
C27
0.1UF
R64
4.7K
R65
4.7K
R63
4.7K
P6
RESET
D7
D6
D5
D4
D3
D2
D1
D0
GND
DRQ
IOW
IOR
IOCHRDY
DACK
IRQ14
A1
A0
CS0
ACTIVITY
GND
D8
D9
D10
D11
D12
D13
D14
D15
KEY
GND
GND
GND
BALE
GND
IOCS16
RESERVED
A2
CS1
GND
HDR-20X2
ATAPI INTERFACE
R71
4.7K
R72
4.7K
R73
4.7K
R74
4.7K
CON7
PC_RST
VS1#
VS2#
PC_CD1#
PC_CD2#
DIOCS16#
CON1
DACS3#
IO/MEM
PC_IO#
PC_B1#
AUX4
AUX6
PCMCIA_3V
PCMCIA_5V
VCC15V
GND
Q3
FDN338P
Q4
FDN338P
C23
220UF
R56
10K
Q1
SMT3(2SC1623)
R57
10K
Q2
SMT3(2SC1623)
PC_VCC33
U19
VOUT
VIN
ADJ/GND
LT1117-3.3/SO
C26
10UF
VCCB
C25
0.1UF
C24
47UF
L1
INDUCTOR
C34
0.1UF
C32
0.1UF
C30
0.1UF
R66
OPEN (0 OHM)
R67
0 OHM
GND

IO/MEM
0 - Memory Cycle, activate OE# and WE/P#
1 - I/O Cycle, activate IORD# and IOWR#

## CIRCUIT DIAGRAM - PCMICA BOARD


C24
R56
R57
R59
L6
C25
R66
R67
C34
Q3
C23
U19
P6
C32
Q4
C26
GND
VCC
PC5V
PC3V
AUX3
AUX4
PCHI
PCLO
IOME
DACS3
CON1
U12
C37
R58
R63
R62
R64
R61
R65
R60
C30
R72
R71
R73
U17
C40
GND
DIOCS16
PCCD2#
PCCD1#
VS2#
VS1#
PCRST
CON7
LFF301000-0401
A
B
C
D
R74
U16
C31
C33
U13
C28
C27
P1
1
11
29
33
68

## CIRCUIT DIAGRAM - PCMCIA BOARD

CHIP CAPACITORS

| | | |
|---|---|---|
| C25 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C27 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C28 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C30 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C31 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C32 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C33 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C34 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C37 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |
| C40 | PYL456470-1040 | CHIP CAP 0.1 uF 50V 10% |

CAPACITORS

| | | |
|---|---|---|
| C23 | PVE039560-2210 | COND ELECT 220 uF 35V 20% |
| C24 | PVE039540-4700 | COND ELECT 47 uF 16V 20% 85`C |
| C26 | PVE039570-1000 | COND ELECT 10 uF 50V 20% |

CHIP RESISTORS

| | | |
|---|---|---|
| R56 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R57 | QCF015020-1030 | CHIP RES. 10K OHM 1/10 W 5% |
| R58 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R59 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R60 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R61 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R62 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R63 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R64 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R65 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R66 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |
| R70 | QCF015020-3300 | CHIP RES. 33 OHM 1/10 W 5% |
| R71 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R72 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R73 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |
| R74 | QCF015020-4720 | CHIP RES. 4.7K OHM 1/10 W 5% |

INTERATED CIRCUITS

| | | |
|---|---|---|
| U12 | RCI740032-0006 | IC 14 PIN 74HCT32D SOIC |
| U13 | RCI740374-0002 | IC 20 PIN 74HC374 |
| U16 | RCI740139-0001 | IC 16 PIN SN74HCT139D SOIC |
| U17 | RCI740139-0001 | IC 16 PIN SN74HCT139D SOIC |
| U19 | RCI111733-0001 | IC 3P B1117N 3.3V BAY-LINEAR 1A LOW |

MISCELLANEOUS & OTHERS

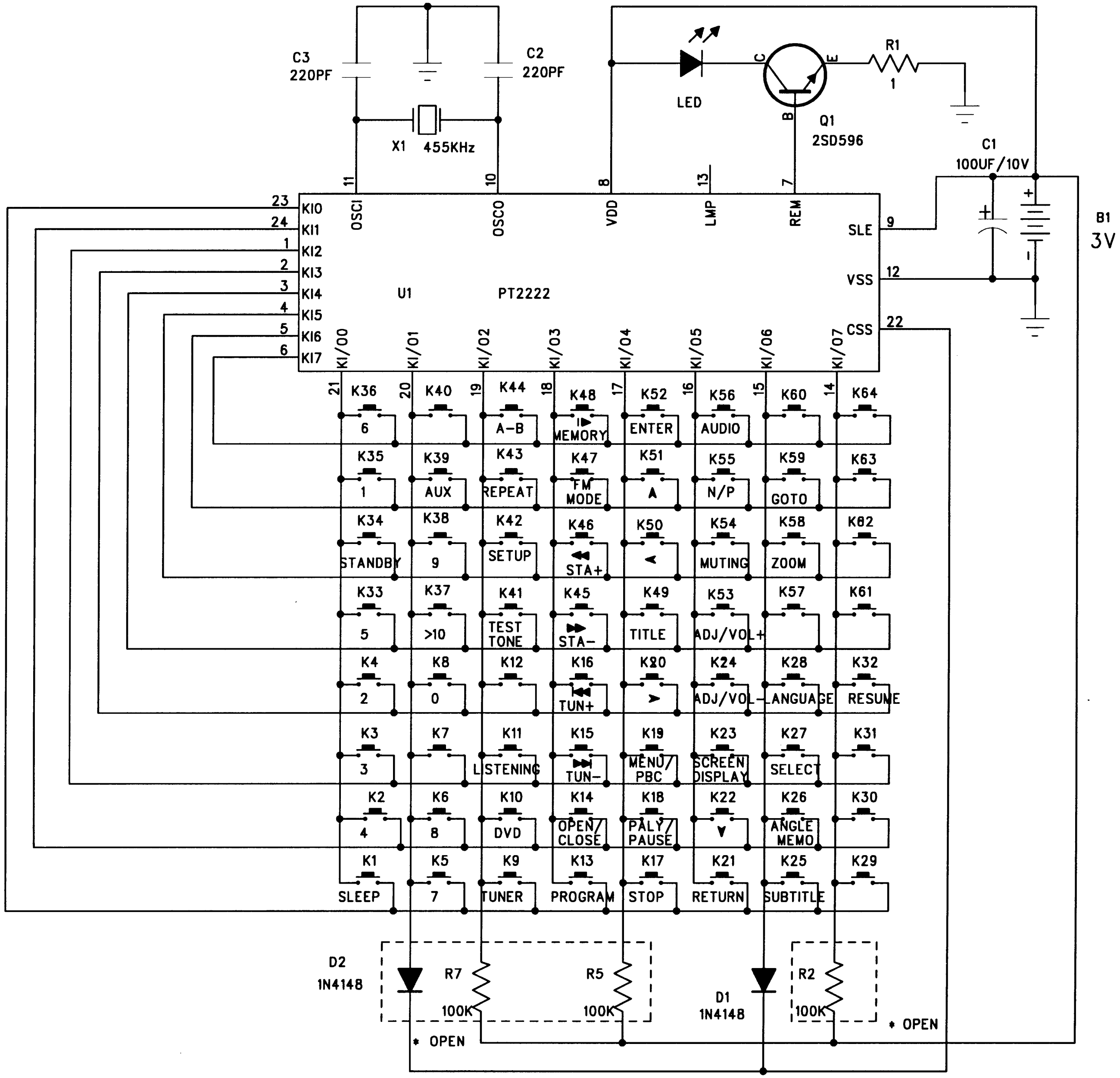
| | | |
|---|---|---|
| CON1 | VFLA11245-2200 | CON/WIRE 10P 220mm BLK |
| CON7 | VFL711245-2200 | CON FLAT WIRE 7P 220mm 2468#26 BLK |
| L6 | SAN001600-1000 | CHOKE 10 uH 10% |
| P1 | COT070002-0001 | PCMCIA JACK 68PIN EJ.HEADER SINGLE TYPE |
| P6 | CCN254020-0440 | CONNECTOR 20x2 PIN PLUG |
| Q3 | RCM000338-2001 | FET FDN338P SOT23 FAIRCHILD |
| Q4 | RCM000338-2001 | FET FDN338P SOT23 FAIRCHILD |

# REMOTE CONTROL BOARD

## TABLE OF CONTENTS

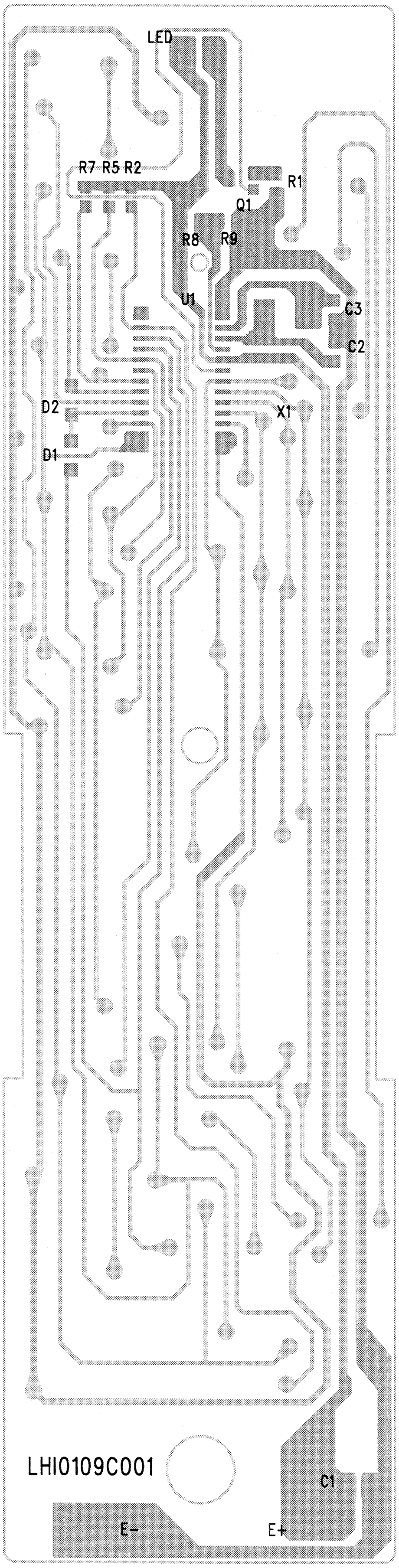
Circuit Diagram ---------------------------------------------------- 45
Component Layout ----------------------------------------------- 46
Part List ------------------------------------------------------------ 47

# CIRCUIT DIAGRAM - REMOTE CONTROL BOARD


C3
220PF
C2
220PF
X1 455KHz
LED
Q1
2SD596
R1
1
C1
100UF/10V
B1
3V
U1
PT2222
KI0
KI1
KI2
KI3
KI4
KI5
KI6
KI7
OSCI
OSCO
VDD
LMP
REM
SLE
VSS
CSS
KI/O0
KI/O1
KI/O2
KI/O3
KI/O4
KI/O5
KI/O6
KI/O7
K36 6
K40
K44 A-B
K48 MEMORY
K52 ENTER
K56 AUDIO
K60
K64
K35 1
K39 AUX
K43 REPEAT
K47 FM MODE
K51 ▲
K55 N/P
K59 GOTO
K63
K34 STANDBY
K38 9
K42 SETUP
K46 STA+
K50 ◄
K54 MUTING
K58 ZOOM
K62
K33 5
K37 >10
K41 TEST TONE
K45 STA-
K49 TITLE
K53 ADJ/VOL+
K57
K61
K4 2
K8 0
K12
K16 TUN+
K20 ►
K24 ADJ/VOL-
K28 LANGUAGE
K32 RESUME
K3 3
K7
K11 LISTENING
K15 TUN-
K19 MENU/PBC
K23 SCREEN DISPLAY
K27 SELECT
K31
K2 4
K6 8
K10 DVD
K14 OPEN/CLOSE
K18 PALY/PAUSE
K22 ▼
K26 ANGLE MEMO
K30
K1 SLEEP
K5 7
K9 TUNER
K13 PROGRAM
K17 STOP
K21 RETURN
K25 SUBTITLE
K29
D2
1N4148
R7
100K
R5
100K
D1
1N4148
R2
100K
* OPEN
* OPEN

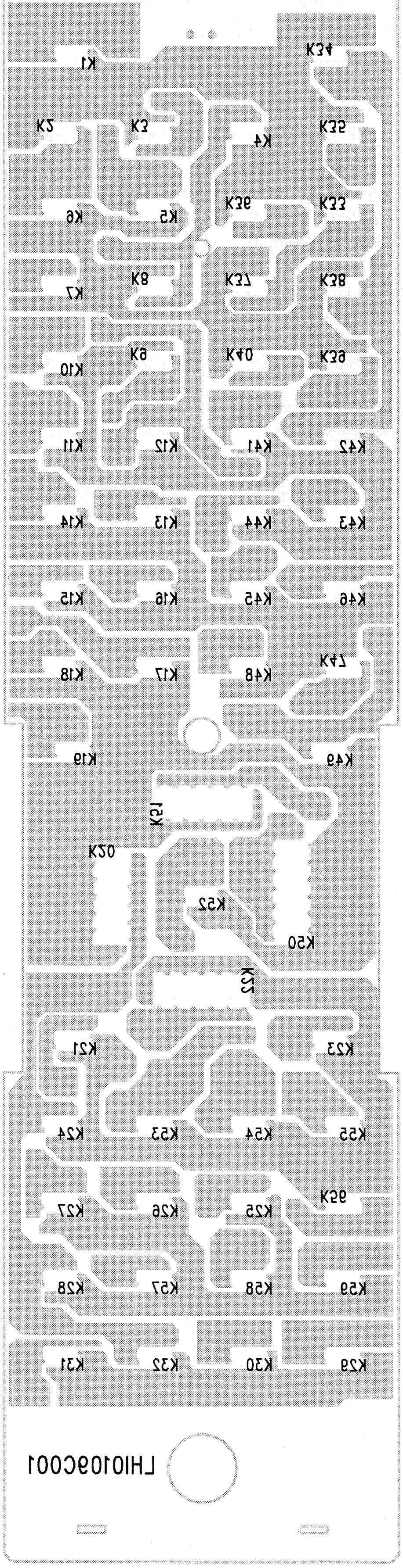
## CIRCUIT DIAGRAM - REMOTE CONTROL

### (TOP)


LED
R7 R5 R2
R1
Q1
R8
R9
U1
C3
C2
D2
X1
D1
LHI0109C001
C1
E-
E+

## CIRCUIT DIAGRAM - REMOTE CONTROL

### (BOTTOM)


K1
K34
K2
K3
K4
K35
K6
K5
K36
K33
K7
K8
K37
K38
K10
K9
K40
K39
K11
K12
K41
K42
K14
K13
K44
K43
K15
K16
K45
K46
K18
K17
K48
K47
K19
K49
K51
K20
K52
K50
K22
K21
K23
K24
K53
K54
K55
K56
K27
K26
K25
K28
K57
K58
K59
K31
K32
K30
K29
LHI0109C001

# PART LIST - REMOTE CONTROL

| CHIP CAPACITORS | | |
|---|---|---|
| C2 | PYL410370-2210 | CHIP CAP 220 pF 50V 5% |
| C3 | PYL410370-2210 | CHIP CAP 220 pF 50V 5% |

| CAPACITORS | | |
|---|---|---|
| C1 | PVE939530-1010 | COND ELECT 100 uF 10V 20% |

| CHIP RESISTORS | | |
|---|---|---|
| R2 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R5 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R7 | QCF015020-1040 | CHIP RES. 100K OHM 1/10 W 5% |
| R1 | QCF015020-1090 | CHIP RES. 1 OHM 1/10 W 5% |
| JW2 | QCF015020-0000 | CHIP RES. 0 OHM JUMP WIRE |

| CHIP DIODE & DIODE | | |
|---|---|---|
| D1 | RCD104148-0010 | CHIP DIODE LL4148<br>TELEFUNKEN SOD80 |
| LED | RHO005208-2001 | DIODE IRT LTE-5208AC |

| INTERATED CIRCUITS | | |
|---|---|---|
| U1 | RCI002222-0001 | IC 24 PIN PT2222-001 PTC |

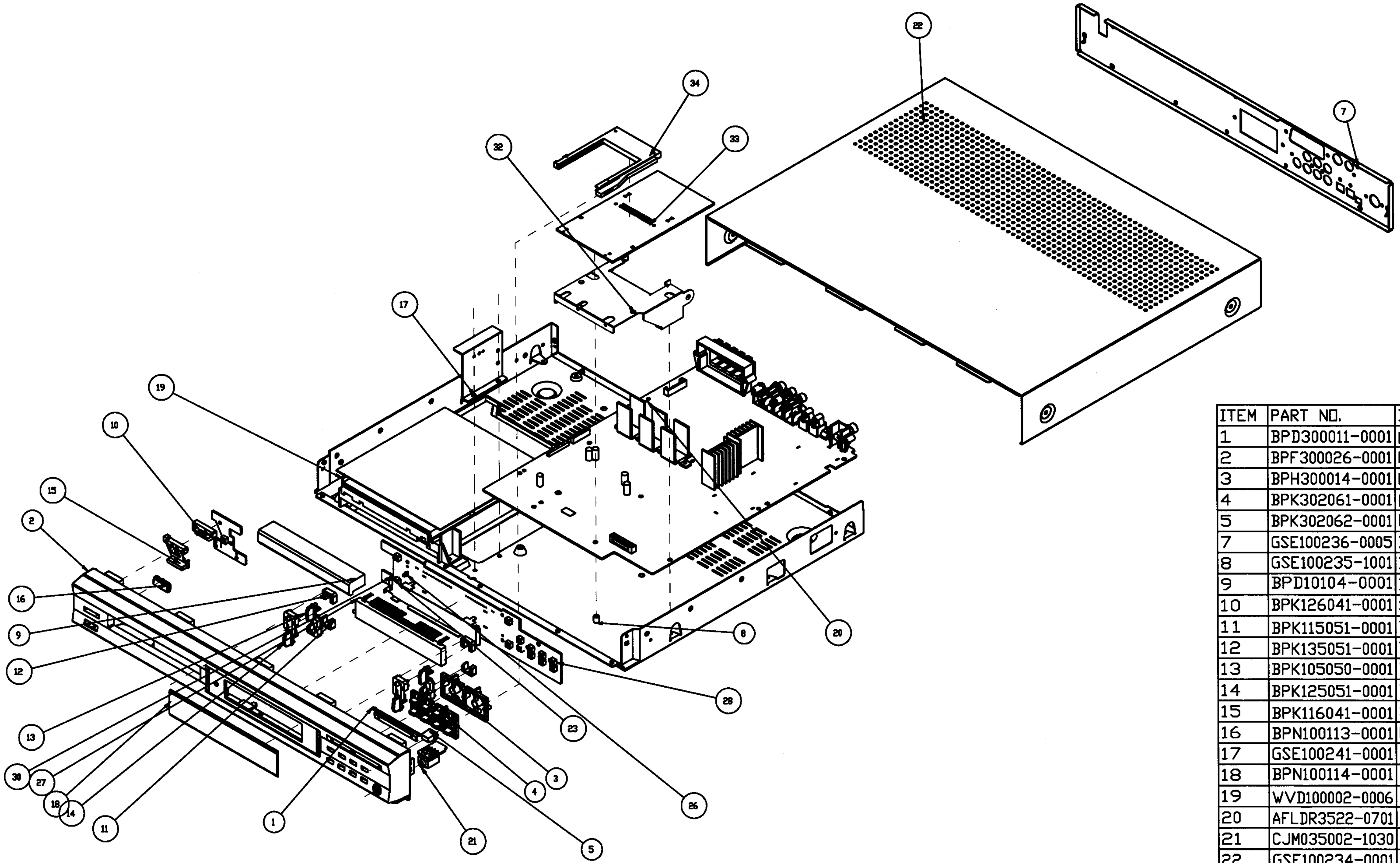
| MISCELLANEOUS & OTHERS | | |
|---|---|---|
| X1 | JRN002001-0010 | RESONATOR MURATA CSB |
| Q1 | RCN200596-0001 | XISTR NPN 2SD596 SMD |

# EXPLODED VIEW

TABLE OF CONTENTS

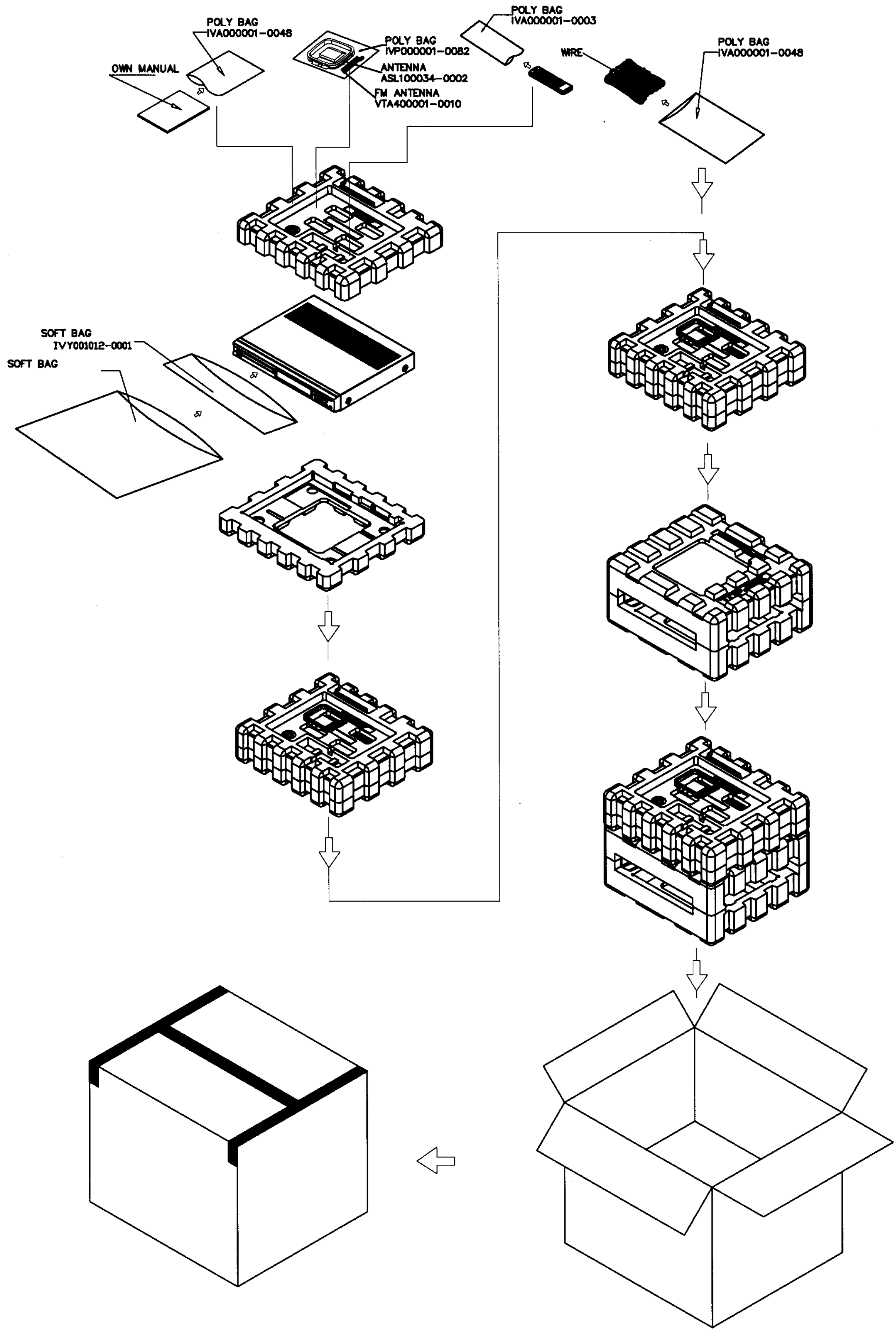
Main Unit Mechanism Exploded ---------------------------- 49
Package Exploded -------------------------------------------- 50

## MAIN UNIT MECHANIAM EXPLODED



| ITEM | PART NO. | DESCRIPTION | QTY |
|---|---|---|---|
| 1 | BPD300011-0001 | PCMCIA DOOR | 1 |
| 2 | BPF300026-0001 | FRONT CAB | 1 |
| 3 | BPH300014-0001 | KNOB HOLDE | 1 |
| 4 | BPK302061-0001 | KNOB 8 KEY | 1 |
| 5 | BPK302062-0001 | PCMCIA KNOB | 1 |
| 7 | GSE100236-0005 | DR352-BACK-NEW | 1 |
| 8 | GSE100235-1001 | DR352-BOTTOM | 1 |
| 9 | BPD10104-0001 | DVD DOOR | 1 |
| 10 | BPK126041-0001 | SWITCH BRACKET | 1 |
| 11 | BPK115051-0001 | VOLUME UP BUTTON BRACKET | 2 |
| 12 | BPK135051-0001 | VOLUME DOWN BUTTON BRACKET | 2 |
| 13 | BPK105050-0001 | VOLUME UP BUTTON | 2 |
| 14 | BPK125051-0001 | VOLUME DOWN BUTTON | 2 |
| 15 | BPK116041-0001 | SWITCH BUTTON | 1 |
| 16 | BPN100113-0001 | REMOTE SENSOR LENS | 1 |
| 17 | GSE100241-0001 | PCB BRACKET | 1 |
| 18 | BPN100114-0001 | DR352-DVD-LENS | 1 |
| 19 | WVD100002-0006 | DR352-DVD-LOADER | 1 |
| 20 | AFLDR3522-0701 | DR3522-MAIN-UNIT | 1 |
| 21 | CJM035002-1030 | DR352-PHONE-JACK | 1 |
| 22 | GSE100234-0001 | DR352-TOP-COVER-NEW | 1 |
| 23 | GTP100019-0001 | DR352-VFD-BRACKET | 1 |
| 26 | KED300003-0020 | LED | 1 |
| 27 | KLV000016-0010 | VFD | 1 |
| 30 | APE102441-0001 | CONTROL PCB | 1 |
| 32 | GSE300036-0001 | PCMCIA BRACKET | 1 |
| 33 | APE301000-0401 | PCMCIA PCB | 1 |
| 34 | COT070002-0001 | PCMCIA JACK | 1 |

## PACKAGE EXPLODED


POLY BAG
IVA000001-0003
POLY BAG
IVA000001-0048
POLY BAG
IVP000001-0082
POLY BAG
IVA000001-0048
WIRE
OWN MANUAL
ANTENNA
ASL100034-0002
FM ANTENNA
VTA400001-0010
SOFT BAG
IVY001012-0001
SOFT BAG